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FILE CONTENT: 1988-PRESENT (VOL 104 ISS 14-VOL 126 ISS 24) (970613/ED)

MOST RECENT CITATIONS FOR PATENTS FROM FIVE MAJOR ISSUING AGENCIES (COVERAGE TO THESE DATES IS NOT COMPLETE):

US 5629460 13 MAY 1997 DE 19540360 7 MAY 1997 EP 773212 14 MAY 1997 JP 09068701 11 MAR 1997 WO 9713756 17 APR 1997

16 15 C C N—C—Cy 2 12 13 14 C C 8 C C 9 5 10

VAR G1=O/S/N
NODE ATTRIBUTES:
NSPEC IS RC AT 15
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RSPEC I NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

ATTRIBUTES SPECIFIED AT SEARCH-TIME: ECLEVEL IS LIM ON ALL NODES ALL RING(S) ARE ISOLATED

L3 34 SEA FILE=MARPAT SSS FUL L1 (MODIFIED ATTRIBUTES)

100.0% PROCESSED 7224 ITERATIONS 34 ANSWERS SEARCH TIME: 00.01.58

quinolinyl)carbonyl]amino]phenylacetyl]amino]-8-oxo-,
[6R-[6.alpha.,7.beta.(R\*)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

FILE 'MARPAT' ENTERED AT 11:17:00 ON 17 JUN 1997
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE CONTENT: 1988-PRESENT (VOL 104 ISS 14-VOL 126 ISS 24) (970613/ED)

MOST RECENT CITATIONS FOR PATENTS FROM FIVE MAJOR ISSUING AGENCIES (COVERAGE TO THESE DATES IS NOT COMPLETE):

US 5629460 13 MAY 1997
DE 19540360 7 MAY 1997
EP 773212 14 MAY 1997
JP 09068701 11 MAR 1997
WO 9713756 17 APR 1997

=> d 1-34 .bevmar; fil marpatprev

L17 ANSWER 1 OF 34 MARPAT COPYRIGHT 1997 ACS

AN 126:277498 MARPAT

TI Preparation of 2-piperazino(or piperidino)acetylaminopropanamines as growth hormone secretagogues

IN Dodge, Jeffrey Alan; Hipskind, Philip Arthur

PA Lilly, Eli, and Co., USA

SO Eur. Pat. Appl., 107 pp.

CODEN: EPXXDW

PI EP 761219 A1 970312

DS R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE

AI EP 96-305917 960814

PRAI US 95-2581 950821

DT Patent

LA English

GI

The title compds. [I; m, n, p = 0-1; o = 0-2; R = Ph, 2-indolyl, benzothienyl, etc.; R1 = Ph3C, Ph, Ph2CH, etc.; R2 = H, C1-4 alkyl, arylsulfonyl, etc.; R3 = Ph, naphthyl, C1-8 alkyl, etc.; R4 = H, C1-3 alkyl; R8 = H, C1-6 alkyl], useful in treating a physiol. condition which may be modulated by an increase in growth hormone, were prepd. and formulated. Thus, treatment of 2-[(4-phenyl)piperazin-1-yl]acetic acid sodium salt with Et3N.HBr and carbonyldiimidazole in DMF followed by addn. of 2-amino-3-(1H-indol-3-yl)-1-[N-(2-methoxybenzyl)amino]propane in DMF afforded the title compd. II. Compds. I are effective at 1-15 mg/kg/day. This invention also provides methods for the treatment of such physiol. conditions which comprise administering a growth hormone secretagogue as described in the present invention in combination with growth hormone releasing hormone.

Ι

IC ICM A61K031-445 ICS A61K031-495

CC 28-17 (Heterocyclic Compounds (More Than One Hetero Atom)) Section cross-reference(s): 1, 2, 34, 63

ST growth hormone secretagogue piperazinoacetylaminopropanamine piperidinoacetylaminopropanamine prepn

170566-35-5P 170566-36-6P IT 170508-05-1P 170566-34-4P 170566-39-9P 170566-40-2P 170566-37-7P 170566-38-8P 170566-41-3P 170566-42-4P 170566-43-5P 170566-44-6P 170566-45-7P 170566-46-8P 170566-47-9P 170566-48-0P 170566-49-1P 170566-50-4P 170566-51-5P 170566-52-6P 170566-56-0P 170566-53-7P 170566-54-8P 170566-55-9P 170566-59-3P 170566-60-6P 170566-57-1P 170566-58-2P 170566-63-9P 170566-64-0P 170566-61-7P 170566-62-8P 170566-65-1P 170566-66-2P 170566-67-3P 170566-68-4P 170566-70-8P 170566-71-9P 170566-72-0P 170566-69-5P 170566-73-1P 170566-74-2P 170566-75-3P 170566-76-4P 170566-77-5P 170566-78-6P 170566-79-7P 170566-80-0P 170566-83-3P 170566-84-4P 170566-81-1P 170566-82-2P Searcher: Shears 308-4994

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170566-85-5P
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                               188949-07-7P
                                              188949-08-8P
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                              188949-11-3P
                                              188949-17-9P
188949-09-9P
               188949-21-5P
188949-19-1P
RL: BAC (Biological activity or effector, except adverse); SPN
(Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)
   (prepn. of 2-piperazino(or piperidino)acetylaminopropanamines as
   growth hormone secretagogues)
9002-72-6, Growth hormone
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
(Biological study)
   (prepn. of 2-piperazino(or piperidino)acetylaminopropanamines as
   growth hormone secretagogues)
                           89-98-5, 2-Chlorobenzaldehyde
                                                            96-32-2,
76-83-5, Trityl chloride
                                                      135-02-4,
                      109-02-4, N-Methylmorpholine
Methyl bromoacetate
                        153-94-6, D-Tryptophan
                                                  541-41-3, Ethyl
2-Methoxybenzaldehyde
                                                            6850-57-3,
chloroformate
                4897-50-1, 4-(Piperidin-1-yl)piperidine
                        7303-48-2, DL-Tryptophanamide
                                                        17766-28-8,
2-Methoxybenzylamine
                         24424-99-5, Di-tert-butyl dicarbonate
1-Cyclohexylpiperazine
              188943-14-8
                            188949-25-9
119378-70-0
RL: RCT (Reactant)
   (prepn. of 2-piperazino(or piperidino)acetylaminopropanamines as
   growth hormone secretagogues)
                               170568-12-4P
                                              170568-13-5P
170508-01-7P
               170568-11-3P
170568-14-6P
               170568-15-7P
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                                              170568-17-9P
170568-18-0P
               170568-19-1P
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                                              170568-22-6P
                                              174634-03-8P
170568-32-8P
               174225-59-3P
                               174634-02-7P
                                              175460-99-8P
174634-04-9P
               175460-96-5P
                               175460-97-6P
                               188949-24-8P
188943-09-1P
               188949-23-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
                           Searcher: Shears 308-4994
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(prepn. of 2-piperazino(or piperidino)acetylaminopropanamines as growth hormone secretagogues)

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ANSWER 2 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
ΑN
     126:225557 MARPAT
    Acylated oligopeptides containing phosphotyrosine as inhibitors of
TI
     protein tyrosine kinases
     Garcia-Echeverria, Carlos; Gay, Brigitte; Furet, Pascal
IN
     Ciba-Geigy A.-G., Switz.; Garcia-Echeverria, Carlos; Gay, Brigitte;
PA
     Furet, Pascal
so
     PCT Int. Appl., 19 pp.
     CODEN: PIXXD2
ΡI
    WO 9707131 A1 970227
DS
        AL, AU, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KP,
         KR, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK,
         TR, TT, UA, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
     RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB,
         GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
    WO 96-EP3479 960806
ΑI
PRAI GB 95-16842 950817
DT
     Patent
LΑ
     English
AB
     Peptides R-A-B-PTI-(AA)m-R1 (R = aryl-, cycloalkyl-, or
     heterocyclylcarbonyl or -sulfonyl; R1 = OH, C-terminal protecting
     group, or primary, secondary, or tertiary amino group; A is absent
     or bivalent radical of natural or unnatural amino acid; B = bivalent
     radical of natural amino acid; PTI = bivalent radical of
     phosphotyrosine or phosphotyrosine mimic; AA = bivalent radical of
     natural or unnatural amino acid; m = 2-15), as well as their
     intramol. disulfide derivs. and salts, were prepd. as inhibitors or
    protein tyrosine kinases. Thus, 2-aminobenzoyl-Glu-Tyr(PO3H2)-Ile-
    Asn-Gln-NH2 trifluoroacetate salt was prepd. by the solid phase
     method and had an IC50 value of 0.022 .mu.M in a test system using
     the phosphorylated "tail" EGFR-MBP fusion protein as ligand.
     Formulations contq. acylated oligopeptides are described.
IC
     ICM C07K007-02
     ICS C07K007-06; A61K038-08
CC
     34-3 (Amino Acids, Peptides, and Proteins)
     Section cross-reference(s): 7, 63
ST
     phosphotyrosyl peptide prepn inhibitor tyrosine kinase
IT
     Peptides, preparation
     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (prepn. of acylated oligopeptides contg. phosphotyrosine as
        inhibitors of protein tyrosine kinases)
IT
     188293-97-2P
                    188294-15-7P
                                   188294-17-9P
                                                  188294-19-1P
     RL: BAC (Biological activity or effector, except adverse); RCT
     (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL
     (Biological study); PREP (Preparation); USES (Uses)
        (prepn. of acylated oligopeptides contq. phosphotyrosine as
        inhibitors of protein tyrosine kinases)
ΙT
     188293-78-9P
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     188293-89-2P
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     188294-68-0P
     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (prepn. of acylated oligopeptides contg. phosphotyrosine as
        inhibitors of protein tyrosine kinases)
     80449-02-1, Protein tyrosine kinase
     RL: BPR (Biological process); BIOL (Biological study); PROC
     (Process)
        (prepn. of acylated oligopeptides contg. phosphotyrosine as
        inhibitors of protein tyrosine kinases)
     93-10-7, 2-Quinolinecarboxylic acid
                                           99-05-8, 3-Aminobenzoic acid
     99-06-9, 3-Hydroxybenzoic acid, reactions
                                                 100-09-4,
                            118-92-3, 2-Aminobenzoic acid
                                                             486-73-7,
     4-Methoxybenzoic acid
     1-Isoquinolinecarboxylic acid 535-87-5, 3,5-Diaminobenzoic acid
                                 771-50-6, 3-Indolecarboxylic acid
     605-65-2, Dansyl chloride
     1477-50-5, 2-Indolecarboxylic acid 2756-85-6
                                                      5345-47-1,
     2-Aminonicotinic acid
                             5424-01-1, 3-Amino-2-Pyrazinecarboxylic acid
     5959-52-4, 3-Amino-2-naphthoic acid
                                          6480-68-8,
                                  18704-37-5, 8-Quinolinesulfonyl
     3-Ouinolinecarboxylic acid
     chloride
                78348-24-0, 2-Indolinecarboxylic acid 86060-81-3
                   156017-45-7
     147762-53-6
     RL: RCT (Reactant)
        (prepn. of acylated oligopeptides contg. phosphotyrosine as
        inhibitors of protein tyrosine kinases)
     66493-39-8P
                   111331-82-9P
                                 115951-16-1P
                                                 117322-30-2P
     162648-54-6P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of acylated oligopeptides contg. phosphotyrosine as
        inhibitors of protein tyrosine kinases)
    ANSWER 3 OF 34 MARPAT COPYRIGHT 1997 ACS
     126:190949 MARPAT
     Use of a tachykinin antagonist and a muscarinic antagonist and/or an
     antihistamine to treat motion sickness
     Tattersall, Frederick David
    Merck Sharp & Dohme Limited, UK; Tattersall, Frederick David
     PCT Int. Appl., 131 pp.
     CODEN: PIXXD2
    WO 9702824 A1 970130
        AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE,
        ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS,
        LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,
     RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB,
        GR, IE, IT, LU, MC, NL, PT, SE
     WO 96-GB1628 960708
PRAI GB 95-13972 950708
     Patent
     English
     The present invention relates to the use of a tachykinin antagonist
     and a muscarinic antagonist and/or an antihistamine for manuf. of a
                               Searcher: Shears 308-4994
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medicament for the treatment or prevention of motion sickness.
    There is also provided pharmaceutical compns. and products
     comprising a tachykinin antagonist and a muscarinic antagonist
     and/or an antihistamine. Examples of prepn. of tachykinin
     antagonists were given, e.g., 2-(R)-[1-(R)-[3,5-
    bis(trifluoromethyl)phenyl]ethoxy]-3-(S)-(4-fluorophenyl)-4-[3-(5-
     oxo-1,2,4-triazolo) methyl] morpholine.
    ICM A61K031-535
    ICS A61K031-66; A61K031-40; A61K031-14; A61K031-445
     63-6 (Pharmaceuticals)
    Section cross-reference(s): 1, 28
    motion sickness tachykinin muscarinic antagonist antihistaminic
    Tachykinins
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (antagonists; tachykinin antagonist and muscarinic antagonist
        and/or antihistaminic to treat motion sickness)
    Antiemetics
    Antihistamines
    Motion sickness
    Muscarinic antagonists
        (tachykinin antagonist and muscarinic antagonist and/or
       antihistaminic to treat motion sickness)
    100-52-7, Benzaldehyde, reactions
                                         106-96-7, Propargyl bromide
     405-50-5, 4-Fluorophenylacetic acid
                                           785-56-8, 3,5-
     Bis(trifluoromethyl)benzoyl chloride
                                            821-10-3,
     1,4-Dichloro-2-butyne
                             1271-19-8, Titanocene dichloride
     90719-32-7, (S) -4-Benzyl-2-oxazolidinone
                                                155742-64-6
     RL: RCT (Reactant)
        (tachykinin antagonist and muscarinic antagonist and/or
       antihistaminic to treat motion sickness)
     79-44-7P, N, N-Dimethylcarbamoyl chloride
                                                459-04-1P,
                                    1271-66-5P, Dimethyl titanocene
     4-Fluorophenylacetyl chloride
     19883-57-9P, (S)-4-Fluorophenylglycine
                                             24843-91-2P
                                                            42718-13-8P
     71783-54-5P
                  159706-87-3P
                                 159707-16-1P
                                                 159707-17-2P
                  170729-77-8P
                                   170729-78-9P
                                                  170902-74-6P
     159707-18-3P
                                   171242-93-6P
                                                  171243-11-1P
     170902-75-7P
                    171242-24-3P
                                   171338-27-5P
                                                  171482-05-6P
     171243-12-2P
                    171243-15-5P
    RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (tachykinin antagonist and muscarinic antagonist and/or
        antihistaminic to treat motion sickness)
     170729-80-3P
                    171242-15-2P
                                   171243-13-3P
                                                  171243-14-4P
    RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL
     (Biological study); PREP (Preparation); USES (Uses)
        (tachykinin antagonist and muscarinic antagonist and/or
        antihistaminic to treat motion sickness)
     51-34-3, Scopolamine
                            58-38-8, Prochlorperazine
                                                        58-39-9,
     Perphenazine
                    58-73-1, Diphenhydramine
                                               60-87-7, Promethazine
     60-99-1, Methotrimeprazine
                                  82-92-8, Cyclizine
                                                       82-93-9,
     Chlorcyclizine
                      82-95-1, Buclizine
                                           86-21-5, Pheniramine
     117-89-5, Trifluoperazine
                                 298-57-7, Cinnarizine
                                                         362-29-8,
     Propiomazine
                   523-87-5, Dimenhydrinate
                                              569-65-3, Meclozine
     604-73-9, Chlorpromethazine
                                  52468-60-7, Flunarizine
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (tachykinin antagonist and muscarinic antagonist and/or
        antihistaminic to treat motion sickness)
L17
    ANSWER 4 OF 34 MARPAT COPYRIGHT 1997 ACS
     126:89156 MARPAT
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Preparation of chiral isothioyanates as derivatizing agents

Searcher: Shears 308-4994

CC

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TN
     Lindner, Wolfgang; Kleidernigg, Oliver Paul
PA
     Lindner, Wolfgang, Austria; Kleidernigg, Oliver Paul
SO
     PCT Int. Appl., 42 pp.
     CODEN: PIXXD2
     WO 9637465 Al 961128
PΙ
        AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE,
DS
         ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT,
         LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
         SG, SI
     RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB,
         GR, IE, IT, LU, MC, NL, PT, SE
ΑI
     WO 96-EP2258 960524
PRAI EP 95-108125 950526
DT
     Patent
T.A
     English
     R1NHCHR2CHR3NCS [R1 = COR4, CO2R5, SO2R6; R2,R3 = aliph. or arom.
AB
     group; R2R3 = atoms to complete carbocyclic or heterocyclic ring; R4
     = aliph. or (hetero) arom. group, aralkyl; R5 = CMe3, (nitro) benzyl,
     fluorenylmethyl; R6 = (hetero)aryl] were prepd. Thus,
     (R,R)-1,2-diaminocyclohexane was cyclocondensed with CS2 and the
     product amidated by 3,5-(O2N)2C6H3COCl to give (R,R)-N-(2-
     isothiocyanatocyclohexyl)-3,5-dinitrobenzamide. The latter was used
     to prep. diastereomeric derivs. of (R)-, and (S)-propranolol. Data
     for chromatog. sepns. of, e.g., amino acids, etc. were given.
     ICM C07C331-24
TC
     ICS C07C331-26; C07D215-50; C07B057-00
     25-22 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
CC
     Section cross-reference(s): 9
ST
     chiral isothiocyanate prepn derivatizing agent
IT
     Chromatography
        (electro-; prepn. of chiral isothiocyanates as derivatizing
        agents)
IT
     Liquid chromatographic chiral stationary phases
        (prepn. of chiral isothiocyanates as derivatizing agents)
IT
     167771-21-3P
                    177697-35-7P
                                   185508-68-3P
                                                  185508-69-4P
     185508-71-8P
                    185508-72-9P
                                   185508-73-0P
                                                  185508-74-1P
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                                                  185508-87-6P
     185508-89-8P
                    185508-91-2P
                                   185508-92-3P
                                                  185508-94-5P
     185508-96-7P
     RL: NUU (Nonbiological use, unclassified); SPN (Synthetic
     preparation); PREP (Preparation); USES (Uses)
        (prepn. of chiral isothiocyanates as derivatizing agents)
IT
                    185509-04-0P
                                  185509-05-1P
                                                  185509-07-3P
     185509-02-8P
     RL: PUR (Purification or recovery); PREP (Preparation)
        (prepn. of chiral isothiocyanates as derivatizing agents)
TT
     185508-76-3P
                    185509-00-6P
     RL: PUR (Purification or recovery); SPN (Synthetic preparation);
     PREP (Preparation)
        (prepn. of chiral isothiocyanates as derivatizing agents)
     99-33-2, 3,5-Dinitrobenzoyl chloride
                                           106-95-6, Allyl bromide,
TT
     reactions
                 3282-30-2, Pivaloyl chloride
                                                4199-09-1,
     (S)-Propranolol
                       5051-22-9, (R)-Propranolol
                                                    5132-80-9,
     9-Acridinecarbonyl chloride hydrochloride
                                                              13822-56-5,
                                                13013-17-7
     3-Aminopropyltrimethoxysilane
                                     20439-47-8, (R,R)-1,2-
     Diaminocyclohexane
                         21436-03-3, (S,S)-1, 2-Diaminocyclohexane
     38460-95-6, 10-Undecenoyl chloride
                                         185508-83-2
     RL: RCT (Reactant)
        (prepn. of chiral isothiocyanates as derivatizing agents)
                    185508-82-1P
                                  185508-98-9P
                                                 185546-54-7P
IT
     139237-77-7P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
                               Searcher: Shears 308-4994
```

L17 ANSWER 5 OF 34 MARPAT COPYRIGHT 1997 ACS

AN 126:31466 MARPAT

TI Boronic acid and ester inhibitors of thrombin

IN Amparo, Eugene C.; Miller, William H.; Pacofsky, Gregory J.; Wityak,
 John; Weber, Patricia C.; Duncia, John J. V.; Santella, Iii Joseph
 B.

PA The Dupont Merck Pharmaceutical Company, USA

SO U.S., 170 pp. Cont.-in-part of U.S. Ser. No. 348,029.

CODEN: USXXAM

PI US 5563127 A 961008

AI US 94-364338 941227

PRAI US 93-36377 930324

US 94-318029 941004

US 94-348029 941201

DT Patent

LA English

GΙ

$$\begin{array}{c|c}
 & \text{NH} \\
 & \text{H} \\
 & \text{NH} \\
 &$$

AB Novel boronic acid and ester and carboxyl-modified amino acid compds. R1-Z-CHR2-A (A = organoboryl, BY1Y2; Y1, Y2 = independently OH, F, organoamino, C1-8 alkoxy, Y1Y2 = cyclic boron ester, amide contg. N, S, O; etc.; Z = (CH2)mCX, X = amido, thioamido, etc., substituted C1-12 alkyl, alkenyl, etc.; R1 = arylalkenyl, aryl = substituted Ph, naphthyl, biphenyl, etc.; R2 = substituted C1-12 alkyl, alkenyl, etc.), which are inhibitors of trypsin-like enzymes, are disclosed. Thus, amino acid modified boronic ester I (Y1Y2 = (+)-pinanediol) was prepd. in multiple steps starting from (+)-pinanediol 4-bromo-1(R)-(4-phenylbenzoyl)aminobutane-1-boronate. Thrombin inhibition activity of some of the compds. prepd. is described.

IC ICM A61K031-395 ICS C07D249-08

NCL 514064000

CC 29-4 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 1

ST amino acid boronate ester inhibitor thrombin

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     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (prepn. of amino acid-modified boronic acids and esters as
        inhibitors of thrombin)
IT
     9002-04-4, Thrombin
     RL: BPR (Biological process); BIOL (Biological study); PROC
     (Process)
        (prepn. of amino acid-modified boronic acids and esters as
        inhibitors of thrombin)
                                     140-29-4, Phenylacetonitrile
IT
     62-56-6, Thiourea, reactions
                                      868-59-7, Cysteine ethyl ester
     140-87-4, Cyanoacetohydrazide
                                   14002-51-8, 4-Phenylbenzoyl chloride
     hydrochloride
                     13226-93-2
     131100-00-0
                   165881-38-9
     RL: RCT (Reactant)
        (prepn. of amino acid-modified boronic acids and esters as
        inhibitors of thrombin)
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                    180896-96-2P
                                    180896-99-5P
                                                    180897-01-2P
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     181033-28-3P
     181138-48-7P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of amino acid-modified boronic acids and esters as
        inhibitors of thrombin)
IT
     180896-86-0P
                    180896-92-8P
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                    181227-37-2P
                                    184046-16-0P
     181139-17-3P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of amino acid-modified boronic acids and esters as
                                Searcher: Shears 308-4994
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#### inhibitors of thrombin)

```
ANSWER 6 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
     125:222433 MARPAT
AN
     HIV protease-inhibiting succinic acid 1,3(S)-diamino-4-phenyl-2(R)-
ΤI
     butanol derivatives
IN
     Beaulieu, Pierre L.; Guse, Ingrid
     Bio-Mega/boehringer Ingeleheim Research Inc., Can.
PA
SO
     U.S., 14 pp.
     CODEN: USXXAM
    US 5545640 A
                    960813
PΙ
ΑI
    US 95-416239 950404
DΤ
     Patent
LΑ
    English
GI
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Disclosed herein are compds. which inhibit human immunodeficiency AB virus (HIV) protease activity and inhibit HIV replication in human cells. Thus, the compds. are indicated for the treatment of HIV infections. The compds. can be represented by the formula I wherein X is a terminal group, for example, an aryloxycarbonyl, an alkanoyl or an arylalkyl carbamoyl; A is absent or an amino acid or a derived amino acid; either R1 or R2 is hydrogen while the other is alkyl or R1 and R2 are joined to form a cyclohexane; Q is hydrogen, hydroxy, halo or lower alkoxy; and Y is a terminal group, for example, an alkylamino, alkoxy or an optionally substituted anilino. Thus, e.g., amide coupling of 1-amino-3(S)-(dibenzylamino)-4-phenyl-2(R)butanol with 4-(1-ethylpropylamino)-2(R)-tert-butyl-4-oxobutanoic acid (both prepd.) provided N4-[3(S)-(dibenzylamino)-2(R)-hydroxy-4phenylbutyl]-N1-(1-ethylpropyl)-3(R)-tert-butylbutanediamide; deprotection to the 3(S) amino deriv. followed by coupling with N-Boc-Thr-OH, deprotection, and coupling with 2-quinolinecarboxylic acid afforded I [X = 2-quinolinecarbonyl, A = Thr, Q = H, R1 =(R)-tert-Bu, R2 = H, Y = NHCHEt2] which exhibited IC50 = 4 nM for inhibition of HIV protease and EC50 = 52 nM for inhibition of syncytia formation.

Ι

IC ICM C07D215-48
ICS C07C271-20; A61K031-47

NCL 514311000

CC 34-2 (Amino Acids, Peptides, and Proteins) Section cross-reference(s): 1, 63

ST succinate diaminophenylbutanol deriv HIV protease inhibitor

IT Acquired immune deficiency syndrome

(treatment; HIV protease inhibiting succinic acid 1,3(S)-diamino-4-phenyl-2(R)-butanol derivs.)

IT 181038-55-1P 181038-58-4P 181038-62-0P 181038-65-3P 181038-69-7P 181038-72-2P 181038-74-4P 181038-76-6P Searcher: Shears 308-4994

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    RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (HIV protease inhibiting succinic acid 1,3(S)-diamino-4-phenyl-
        2(R)-butanol derivs.)
     93-10-7, 2-Quinolinecarboxylic acid
                                          105-36-2, Ethyl bromoacetate
     576-26-1, 2,6-Dimethylphenol
                                    616-24-0, 1-Ethylpropylamine
     2592-18-9
                 117237-87-3
                               118970-37-9
     RL: RCT (Reactant)
        (HIV protease inhibiting succinic acid 1,3(S)-diamino-4-phenyl-
        2(R)-butanol derivs.)
     13335-71-2P, (2,6-Dimethylphenoxy) acetic acid
                                                     170359-24-7P
     181038-41-5P
                    181038-45-9P
                                   181038-49-3P
                                                  181038-52-8P
     181229-34-5P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (HIV protease inhibiting succinic acid 1,3(S)-diamino-4-phenyl-
        2(R)-butanol derivs.)
     144114-21-6, Retropepsin
     RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
     (Biological study)
        (HIV protease-inhibiting succinic acid 1,3(S)-diamino-4-phenyl-
        2(R)-butanol derivs.)
    ANSWER 7 OF 34 MARPAT COPYRIGHT 1997 ACS
     125:222432 MARPAT
     Preparation of .alpha.-aminoboronic acid and ester as inhibitors of
     Amparo, Eugene Cruz; Miller, William Henry; Pacofsky, Gregory James;
    Wityak, John; Weber, Patricia Carol; Duncia, John Jonas Vytautas;
     Santella, Joseph Basil, III
     The Du Pont Merck Pharmaceutical Company, USA
     PCT Int. Appl., 416 pp.
     CODEN: PIXXD2
    WO 9620689 A2 960711
    W: AU, CA, JP, MX, NZ
     RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
    WO 95-US16248 951213
PRAI US 94-364338 941227
     Patent
     English
     Novel boronic acid and ester and carboxyl-modified amino acid
                               Searcher: Shears 308-4994
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compds. of formula R1-Z-CHR1-A [A = BY1Y2, CO CF3, CO2R3, COCO2R3,
COCOR3, PO3H2, CHO, etc.; wherein Y1, Y2 = OH, F, NR3R4, C1-8
alkoxy; or Y1 and Y2 are taken together to form a cyclic boron
ester, cyclic boron amide, or cyclic boron amide ester contg. 2-20 C
atoms and 0-3 heteroatoms selected from N, S, or S; R3 = H, C1-8
alkyl, aryl-C1-4 alkyl, C5-7 cycloalkyl, Ph; R4 = group listed in
R3, phenylsulfonyl; Z = (CH2)m CON R8, (CH2)m C(S)NR8, (CH2)m CO2,
(CH2)m C(S)O, (CH2)mSO2O; wherein m = 0-6 and R8 = H,
ring-(un) substituted phenylalkyl, C3-7 cycloalkyl, C1-8 alkyl; R1 =
ring-substituted arylalkyl or heteroaryl, etc.; R2 = substituted
C1-12 alkyl or C2-12 alkenyl, (substituted alkyl)phenylalkyl], which
are inhibitors of trypsin-like enzymes, notably blood coagulation
proteases such as human thrombin, factor VIIa, factor IXa, factor
Xa, plasma kallikrein, and plasmin, and are useful for the treatment
of thrombosis and inflammation or as anticoagulants for the
processing of blood for therapeutic or diagnostic purposes or for
the prodn. of blood products or fragments, are prepd. Thus,
(+)-pinanediol 4-bromo-1(R)-aminobutane-1-boronate hydrochloride was
acylated by 4-phenylbenzoyl chloride in the presence of
N-methylmorpholine in CH2Cl2 to give (+)-pinanediol
4-bromo-1(R)-(4-phenylbenzoylamino)butane-1-boronate, which
underwent azidolysis with NaN3 in DMF at 70.degree. for 2 h to give
(+)-pinanediol 4-azido-1(R)-(4-phenylbenzoylamino)butane-1-boronate,
and catalytic hydrogenation in the presence of Pd(OH)2/C in a mixt.
of MeOH and 1 M aq. HCl to give (+)-pinanediol 4-amino-1(R)-(4-
phenylbenzoylamino)butane-1-boronate, i.e., N1-(4-
phenylbenzoyl)boroornithine (+)-pinanediol ester hydrochloride,
followed by condensation with aminoiminomethanesulfonic acid in the
presence of 4-dimethylaminopyridine in ethanol at reflux of 3 h to
give N-(4-phenylbenzoyl)boroarginine (+)-pinanediol ester,
bisulfite. The latter compd. in vitro inhibited human thrombin and
factor Xa with Ki value of <500 and 50,000 nM, resp.
ICM A61K
34-2 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 1, 29
antithrombotic antiinflammatory boronic acid ester; boronic acid
ester prepn inhibitor thrombin; boroarginine pinanediol blood
coagulation protease inhibitor
Anticoagulants and Antithrombotics
Inflammation inhibitors
   (prepn. of .alpha.-aminoboronic acids and esters as inhibitors of
   blood coagulation proteases for disease therapy)
Amino acids, preparation
RL: BAC (Biological activity or effector, except adverse); SPN
(Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)
   (analogs, boron-contg.; prepn. of .alpha.-aminoboronic acids and
   esters as inhibitors of blood coagulation proteases for disease
   therapy)
180897-32-9P
RL: BAC (Biological activity or effector, except adverse); SPN
(Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)
   (nod oh, dprepn. of .alpha.-aminoboronic acids and esters as
   inhibitors of blood coagulation proteases for disease therapy)
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180897-17-0P

Searcher: Shears 308-4994

180897-18-1P

180897-16-9P

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180897-15-8P

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               180898-01-5P
                               180898-02-6P
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181139-13-9P
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                                              181227-38-3P
181139-17-3P
RL: BAC (Biological activity or effector, except adverse); SPN
(Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)
   (prepn. of .alpha.-aminoboronic acids and esters as inhibitors of
   blood coagulation proteases for disease therapy)
                      9002-05-5, Factor Xa
                                              37259-58-8, Serine
9002-04-4, Thrombin
           65312-43-8, Blood-coagulation factor VIIa
RL: BPR (Biological process); BSU (Biological study, unclassified);
MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
   (prepn. of .alpha.-aminoboronic acids and esters as inhibitors of
   blood coagulation proteases for disease therapy)
                                76-83-5, Trityl chloride
                                                            105-36-2,
62-56-6, Thiourea, reactions
Ethyl bromoacetate
                     140-29-4, Phenylacetonitrile
                                                     140-87-4,
                       868-59-7
                                   1184-90-3,
Cyanoacetylhydrazine
Aminoiminomethanesulfonic acid
                                  13226-93-2
                                               14002-51-8,
                                                      131100-00-0
4-Phenylbenzoyl chloride
                           26628-22-8, Sodium azide
165881-38-9
                           Searcher: Shears 308-4994
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IT

IT

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RL: RCT (Reactant)
        (prepn. of .alpha.-aminoboronic acids and esters as inhibitors of
        blood coagulation proteases for disease therapy)
                                               180896-85-9P
                 57723-86-1P
                               103249-79-2P
IT
                                                   180896-90-6P
     180896-87-1P
                    180896-88-2P
                                   180896-89-3P
     180896-91-7P
                    180896-94-0P
                                    180896-96-2P
                                                   180896-99-5P
     180897-01-2P
                    181033-28-3P
                                    181033-29-4P
                                                   181033-30-7P
                    181138-48-7P
     181138-47-6P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of .alpha.-aminoboronic acids and esters as inhibitors of
        blood coagulation proteases for disease therapy)
    ANSWER 8 OF 34 MARPAT COPYRIGHT 1997 ACS
T.17
     125:185902 MARPAT
NΑ
     Use of a tachykinin antagonist and an opioid analgesic for a
TΙ
     pharmaceutical analgesic combination, and tachykinin antagonist
     prepn.
IN
     Hill, Raymond George
     Merck Sharp and Dohme Limited, UK
PA
     PCT Int. Appl., 36 pp.
SO
     CODEN: PIXXD2
     WO 9620009 Al 960704
PΤ
        AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES,
DS
         FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU,
         LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG,
         SI, SK
     RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR,
         IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
     WO 95-GB2931 951215
AΤ
PRAI GB 94-26102 941223
     Patent
DT
     English
LA
     A tachykinin antagonist and an opioid analgesic are used for manuf.
AB
     of a medicament for the treatment or prevention of pain or
     nociception. Also provided are pharmaceutical compns. and products
     comprising a tachykinin antagonist and an opioid analgesic. Prepn.
     of e.g. 2-(R)-[1-(R)-(3,5-bis(trifluoromethyl)phenyl)ethoxy]-4-[5-bis(trifluoromethyl)phenyl)ethoxy
     (dimethylaminomethyl)-1,2,3-triazol-4-yl]methyl-3-(S)-(4-
     fluorophenyl)morpholine is described. Active-ingredient
     formulations are included.
TC
     ICM A61K045-06
     1-11 (Pharmacology)
CC
     Section cross-reference(s): 28, 63
     tachykinin antagonist opioid analgesic combination antinociceptive;
ST
     morpholine deriv prepn analgesic pharmaceutical combination
IT
     Analgesics
     Drug interactions
     Pharmaceutical dosage forms
     Resolution
        (tachykinin antagonist and opioid analgesic for pharmaceutical
        analgesic combination, and tachykinin antagonist prepn.)
ΙT
     RL: BAC (Biological activity or effector, except adverse); THU
     (Therapeutic use); BIOL (Biological study); USES (Uses)
        (tachykinin antagonist and opioid analgesic for pharmaceutical
        analgesic combination, and tachykinin antagonist prepn.)
IT
     Pharmaceutical dosage forms
        (injections, tachykinin antagonist and opioid analgesic for
        pharmaceutical analgesic combination, and tachykinin antagonist
        prepn.)
                                Searcher: Shears 308-4994
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IT
     Pharmaceutical dosage forms
        (injections, emulsions, tachykinin antagonist and opioid
        analgesic for pharmaceutical analgesic combination, and
        tachykinin antagonist prepn.)
ÏΤ
     Pharmaceutical dosage forms
        (parenterals, tachykinin antagonist and opioid analgesic for
        pharmaceutical analgesic combination, and tachykinin antagonist
        prepn.)
     Pharmaceutical dosage forms
TΤ
        (tablets, tachykinin antagonist and opioid analgesic for
        pharmaceutical analgesic combination, and tachykinin antagonist
TΤ
    Kinin receptors
     Receptors
     RL: BPR (Biological process); BIOL (Biological study); PROC
        (tachykinin, tachykinin antagonist and opioid analgesic for
        pharmaceutical analgesic combination, and tachykinin antagonist
        prepn.)
IT
     Kinin receptors
     Receptors
     RL: BPR (Biological process); BIOL (Biological study); PROC
     (Process)
        (tachykinin NK1, tachykinin antagonist and opioid analgesic for
        pharmaceutical analgesic combination, and tachykinin antagonist
        prepn.)
     Pharmaceutical dosage forms
TТ
        (topical, tachykinin antagonist and opioid analgesic for
        pharmaceutical analgesic combination, and tachykinin antagonist
       prepn.)
                 1271-66-5P, Dimethyl titanocene
                                                   19883-57-9P,
TT
     459-04-1P
                                   24843-91-2P
                                                 42718-13-8P
     (S)-(4-Fluorophenyl)glycine
                  159706-87-3P
                                  159707-16-1P
                                                159707-17-2P
     71783-54-5P
     159707-18-3P
                    170729-77-8P
                                   170902-74-6P
                                                  170902-75-7P
                    171243-12-2P
                                   171243-13-3P
                                                  171243-14-4P
     171243-11-1P
                    171338-27-5P
                                   178616-85-8P
     171243-15-5P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and reaction; tachykinin antagonist and opioid analgesic
        for pharmaceutical analgesic combination, and tachykinin
        antagonist prepn.)
                                               100-52-7, Benzaldehyde,
IΤ
     79-44-7, N, N-Dimethylcarbamoyl chloride
                                               106-96-7, Propargyl
     reactions
                 106-93-4, 1,2-Dibromoethane
                                                      785-56-8,
    bromide
               405-50-5, 4-Fluorophenylacetic acid
     3,5-Bis(trifluoromethyl)benzoyl chloride
                                                            990-91-0,
                                                821-10-3
     Tetrabenzyl pyrophosphate
                                 1271-19-8, Titanocene dichloride
                 3282-30-2, Trimethylacetyl chloride
                                                       7087-68-5,
    N, N-Diisopropylethylamine
                                 17026-42-5
                                               36982-84-0,
     2,4,6-Triisopropylphenylsulfonyl azide
                                              90719-32-7,
     4-(S)-Benzyl-2-oxazolidinone
     RL: RCT (Reactant)
        (reaction; tachykinin antagonist and opioid analgesic for
        pharmaceutical analgesic combination, and tachykinin antagonist
        prepn.)
     57-27-2, Morphine, biological studies
                                             136982-36-0, CP-99,994
IT
     136982-37-1, CP-100,263
     RL: BAC (Biological activity or effector, except adverse); THU
     (Therapeutic use); BIOL (Biological study); USES (Uses)
        (tachykinin antagonist and opioid analgesic for pharmaceutical
        analgesic combination, and tachykinin antagonist prepn.)
                    171482-05-6P
TT
     171242-93-6P
                               Searcher: Shears 308-4994
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RL: SPN (Synthetic preparation); PREP (Preparation)
        (tachykinin antagonist and opioid analgesic for pharmaceutical
        analgesic combination, and tachykinin antagonist prepn.)
                    171242-11-8P
                                   171242-15-2P
                                                 171242-24-3P
IT
     170729-80-3P
     180595-28-2P
     RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL
     (Biological study); PREP (Preparation); USES (Uses)
        (tachykinin antagonist and opioid analgesic for pharmaceutical
        analgesic combination, and tachykinin antagonist prepn.)
                           76-41-5, Oxymorphone
                                                  76-57-3, Codeine
IT
     57-42-1, Meperidine
                          77-07-6, Levorphanol
                                                 125-28-0, Dihydrocodeine
     76-99-3, Methadone
     125-29-1, Hydrocodone
                             359-83-1, Pentazocine
                                                     437-38-7, Fentanyl
     466-99-9, Hydromorphone
                               469-62-5, Propoxyphene
                                                        561-27-3,
                        20594-83-6, Nalbuphine
                                                 42408-82-2, Butorphanol
     Diacetylmorphine
                                              71195-58-9, Alfentanil
     52485-79-7, Buprenorphine
                                 56030-54-7
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (tachykinin antagonist and opioid analgesic for pharmaceutical
        analgesic combination, and tachykinin antagonist prepn.)
L17 ANSWER 9 OF 34 MARPAT COPYRIGHT 1997 ACS
     125:59145 MARPAT
AN
    N-Terminus modified peptide analogs of LHRH as LHRH antagonists
ΤI
    Haviv, Fortuna; Fitzpatrick, Timothy D.; Swenson, Rolf E.; Nichols,
IN
     Charles J.; Mort, Nicholas A.
PΑ
     Tap Holdings Inc., USA
     U.S., 33 pp. Cont.-in-part of U.S. Ser. No. 103,474, abandoned.
SO
     CODEN: USXXAM
    US 5502035 A
                    960326
PΤ
    US 94-279677 940727
ΑI
PRAI US 93-103474 930806
DT
    Patent
    English
LA
     Decapaptide and undecapaptides substituted on the N-terminal
AB
     nitrogen atom by acyl groups which include furo-2-yl, isonicotinyl,
     nicotinyl, 2-, 3-, and 4-quinolinecarbonyl, shikimyl,
     dihydroshikimyl, and tetrahydrofur-2-oyl are potent antagonists of
     LHRH and are useful for suppressing the levels of sex hormones in
              Thus, e.g., N-Ac-D-Tyr-D-2Nal-D-4ClPhe-D-3Pal-Ser-NMeTyr-D-
    mammals.
     Lys(N-.epsilon.-nicotinyl)-Leu-Lys(N-.epsilon.-isopropyl)-Pro-D-Ala-
    NH2 [D-2Nal = D-3-(naphth-2-yl)alanine, D-3Pal =
     D-3-(pyrid-3-yl)alanine] was prepd. in a peptide synthesizer and
     exhibited in vitro LHRH antagonist potency of pA2 = 10.75, where pA2
     = neg. logarithm of the concn. of antagonist required to shift the
     response curve produced by the agonist leuprolide to two-fold higher
     concn.
IC
     ICM C07K014-59
NCL 514015000
     34-3 (Amino Acids, Peptides, and Proteins)
CC
     Section cross-reference(s): 2, 63
     peptide LHRH antagonist sex hormone suppression
ST
ΙT
     Peptides, preparation
     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (deca-, N-terminus modified peptide analogs of LHRH as LHRH
        antagonists)
IT
     Peptides, preparation
     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
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(undeca-, N-terminus modified peptide analogs of LHRH as LHRH
        antagonists)
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     157147-52-9P
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     177767-84-9P
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                    177767-89-4P
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     177767-92-9P
                    177767-93-0P
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     177767-96-3P
                     177767-97-4P
                                    177767-98-5P
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                    177768-02-4P
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                    177768-15-9P
                                    177768-16-0P
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                                    177768-24-0P
     177929-81-6P
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     178033-68-6P
     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (N-terminus modified peptide analogs of LHRH as LHRH antagonists)
IT
     9034-40-6, LHRH
     RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
     (Biological study)
        (N-terminus modified peptide analogs of LHRH as LHRH antagonists)
IT
                                           98-59-9, p-Toluenesulfonyl
     59-67-6, Nicotinic acid, reactions
                138-59-0, Shikimic acid
                                           553-53-7, Nicotinyl hydrazide
                 3303-84-2, Boc-3-aminopropanoic acid
                                                          3326-71-4
     2188-18-3
     6404-29-1, Boc-6-aminocaproic acid
                                           7764-95-6
                                                        7764-95-6D,
                                Searcher: Shears 308-4994
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13139-16-7
     4-methylbenzhydrylamine resin bound
                                          13139-15-6
                 13734-36-6D, amino-substituted resin bound 13836-37-8
     13734-36-6
                 15761-38-3D, amino-substituted resin bound
                                                              15761-39-4
     14609-04-2
     16874-33-2, Tetrahydro-2-furoic acid 16937-99-8
                                                       18942-49-9
                                                  37553-65-4,
                23680-31-1, Boc-O-benzylserine
     21835-19-8
                               37784-17-1
                                            47173-80-8,
    Boc-N-methylphenylalanine
                           51077-14-6 53363-89-6, Boc-N-methylleucine
    Boc-D-O-benzylserine
     54689-36-0, L-Gulonic lactone 56558-31-7 57292-44-1,
                                  57294-38-9
                                             58438-04-3,
    Boc-D-4-chlorophenylalanine
                             66838-42-4, (R)-Tetrahydro-3-furoic acid
    Boc-(2-naphthyl)alanine
     68090-88-0, Boc-4-chlorophenylalanine 76932-48-4,
    Boc-D-(naphth-1-yl)alanine 76985-10-9, Boc-D-(2-naphthyl)alanine
    87392-05-0, (R)-Tetrahydro-2-furoic acid 87392-07-2,
                                  98266-33-2
                                               115186-31-7
     (S)-Tetrahydro-2-furoic acid
     117142-26-4, Boc-(3-pyridyl) alanine 121080-95-3, Boc-D-citrulline
                                       122546-52-5
                                                     125323-99-1
     121080-97-5, Boc-D-homocitrulline
                               168395-26-4, (S)-Tetrahydro-3-furoic
     135101-22-3 168193-97-3
                                       177615-00-8 177615-02-0,
           177614-98-1
                         177614-99-2
    Boc-4-aminoheptanoic acid
    RL: RCT (Reactant)
        (N-terminus modified peptide analogs of LHRH as LHRH antagonists)
     177615-01-9DP, resin-bound
    RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (N-terminus modified peptide analogs of LHRH as LHRH antagonists)
     9002-67-9, LH
     RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
     (Biological study)
        (suppression; N-terminus modified peptide analogs of LHRH as LHRH
       antagonists)
    ANSWER 10 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
     125:33490 MARPAT
     Preparation of quinoline-4-carboxamides and related compounds as as
    NK3 antagonists.
     Farina, Carlo; Giardina, Giuseppe Arnaldo Mari; Grugni, Mario;
    Raveglia, Luca Francesco
    Smithkline Beecham Farmaceutici S.P.A., Italy
     PCT Int. Appl., 28 pp.
     CODEN: PIXXD2
    WO 9602509 A1 960201
    W: JP, US
    RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
    WO 95-EP2638 950706
PRAI IT 94-MI1466 940714
     Patent
    English
```

IT

IT

ΑN

TΤ

IN

PA SO

PΙ

DS

ΑI

DT

LА GΙ

Title compds. [I; Ar = (substituted) Ph, naphthyl, heterocyclyl; R = AB (substituted) Ph, heterocyclyl, CHR4R5; R4 = H, alkyl, cycloalkyl, (substituted) Ph, heteroaryl, etc.; R5 = alkyl, (CH2) nAr; n = 0-3; R1 = H, alkyl; R2, R3 = H, alkyl, alkenyl, aryl, carboxamido, sulfonamido, alkoxy, OH, halo, NO2, cyano, hydroxyalkyl, aminoalkyl, acylamino, CO2H, alkylsulfonylamino, etc; X = O, S, H2, NCN], were Thus, benzylamine, 2-phenylquinoline-4-carbonyl chloride, and K2CO3 were stirred in DMF at 0.degree.-room temp. overnight to give N-benzyl-2-phenylquinoline-4-carboxamide. The latter inhibited binding of 125I-N-Me-Phe7-NKB to guinea pig cortical membranes with IC50 = 620 nM.ICM C07D215-52 IC ICS A61K031-47; C07D215-20; C07D401-12 27-17 (Heterocyclic Compounds (One Hetero Atom)) CC Section cross-reference(s): 1 quinolinecarboxamide prepn neurokinin antagonist ST IT Analgesics Anticonvulsants and Antiepileptics Antidepressants Anxiolytics (prepn. of quinoline-4-carboxamides and related compds. as as NK3 antagonists) IT Eye Hay fever Psoriasis (treatment of inflammation; prepn. of quinoline-4-carboxamides and related compds. as as NK3 antagonists) IT Kidney, disease Parkinsonism Skin, disease (treatment; prepn. of quinoline-4-carboxamides and related compds. as as NK3 antagonists) IT Bronchodilators (antiasthmatics, prepn. of quinoline-4-carboxamides and related compds. as as NK3 antagonists) IT Tranquilizers and Neuroleptics (antipsychotics, prepn. of quinoline-4-carboxamides and related compds. as as NK3 antagonists) IT Dermatitis (atopic, treatment; prepn. of quinoline-4-carboxamides and related compds. as as NK3 antagonists) IT Lung, disease (chronic obstructive, treatment; prepn. of quinoline-4carboxamides and related compds. as as NK3 antagonists) ΙT Nervous system (disease, Huntington's chorea, treatment of inflammation; prepn. of quinoline-4-carboxamides and related compds. as as NK3 antagonists) IT Nervous system (disease, degeneration, treatment of inflammation; prepn. of quinoline-4-carboxamides and related compds. as as NK3 antagonists) ΙT (disease, incontinence, treatment; prepn. of quinoline-4carboxamides and related compds. as as NK3 antagonists) IT Appetite (disorder, treatment of inflammation; prepn. of

quinoline-4-carboxamides and related compds. as as NK3

Searcher: Shears 308-4994

antagonists)

```
Kinins (animal hormones)
IT
     RL: BPR (Biological process); BSU (Biological study, unclassified);
     MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
        (neuro-, antagonists; prepn. of quinoline-4-carboxamides and
        related compds. as as NK3 antagonists)
                                                  177360-19-9P
ΙT
     177360-16-6P
                   177360-17-7P
                                  177360-18-8P
                                                  177360-23-5P
                                   177360-22-4P
     177360-20-2P
                    177360-21-3P
                                                  177360-27-9P
                                   177360-26-8P
     177360-24-6P
                    177360-25-7P
     177360-28-0P
                    177606-27-8P
     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (prepn. of quinoline-4-carboxamides and related compds. as as NK3
        antagonists)
                                   64-04-0, Phenethylamine
                                                             98-86-2,
IT
     62-53-3, Aniline, reactions
     Acetophenone, reactions
                              100-46-9, Benzylamine, reactions
     132-60-5, 2-Phenylquinoline-4-carboxylic acid
                                                    134-20-3, Methyl
     anthranilate
                   1226-34-2
                                3731-51-9, 2-Aminomethylpyridine
     5763-61-1, 3,4-Dimethoxybenzylamine
                                           6850-57-3,
                           7524-50-7
                                        21685-47-2, D-Valine methyl ester
     2-Methoxybenzylamine
     43071-45-0, 3-Methyl-2-phenylquinoline-4-carboxylic acid
     52351-75-4, 6-Methoxyisatin
                                  85068-29-7, 3,5-
     Bis(trifluoromethyl)benzylamine
     RL: RCT (Reactant)
        (prepn. of quinoline-4-carboxamides and related compds. as as NK3
        antagonists)
     59661-86-8P
                   174636-63-6P
                                  174636-64-7P
                                                 177360-29-1P
IT
                   177360-31-5P
                                   177360-32-6P
     177360-30-4P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of quinoline-4-carboxamides and related compds. as as NK3
        antagonists)
    ANSWER 11 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
AN
     124:343300 MARPAT
     Preparation of imidazoline derivatives as tachykinin receptor
ΤI
     antagonists
     Hipskind, Philip Arthur; Howbert, James Jeffry; Muehl, Brian Stephen
IN
PΑ
     Lilly, Eli, and Co., USA
     Can. Pat. Appl., 61 pp.
SO
     CODEN: CPXXEB
PΙ
     CA 2151113 AA 951211
     CA 95-2151113 950606
ΑI
PRAI US 94-257966 940610
     Patent
DT
     English
LΑ
```

GI

III

$$R^{8}$$
 $NXR^{3}$ 
 $R^{2}(CH_{2})_{n}$ 
 $NXR^{3}$ 
 $R^{2}(CH_{2})_{m}$ 
 $NXR^{3}$ 
 $R^{2}(CH_{2})_{m}$ 
 $NYR^{3}$ 
 $R^{3}$ 
 $R^{2}(CH_{2})_{m}$ 
 $NYR^{3}$ 
 $R^{3}$ 
 $R^{2}(CH_{2})_{m}$ 
 $R^{3}$ 
 $R^{3}$ 

The invention provides novel substituted 2-imidazolines I [X = (CHR4)p(CHR6)q; m, n, p, q = 0, 1; R1 = H, (un)substituted trityl, Ph, Ph2CH, PhO, PhS, piperazinyl, piperidinyl, indolyl, amino, leaving group, NHCH2R5, etc.; R2 = (un)substituted Ph, 2- or 3-indolyl or -indolinyl, benzothienyl, benzofuranyl, naphthyl; R3 = (un)substituted Ph, phenylalkylidene, cycloalkyl, alkyl, H, alkenyl, cycloalkenyl; R4, R6 = H, alkyl; R5 = pyridyl, anilinoalkylidenyl, anilinocarbonyl] and their salts and solvates. The compds. are useful in the treatment or prevention of a variety of physiol. disorders assocd. With an excess of tachykinins. For example, Boc-Trp-OH was converted in 4 steps to intermediate II, which was cyclized in 83% yield in refluxing 1,2-Cl2C6H4 to give title compd. III. In NK-1 and NK-2 receptor binding assays, III had IC50 values of 0.12 and 0.47 .mu.M, resp.

IC ICM C07D233-22

ICS C07D401-02; C07D403-00; C07D405-02; C07D409-02; C07D413-02;
 A61K031-395

CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1

ST imidazoline prepn tachykinin receptor antagonist

IT Allergy inhibitors

Analgesics

Antidepressants

Antiemetics

Anxiolytics

Immunosuppressants

Inflammation inhibitors

Nervous system agents

Nootropics

(prepn. of imidazoline derivs. as tachykinin receptor antagonists)

IT Down's syndrome

Drug dependence

Eye, disease

Multiple sclerosis

Parkinsonism

Schizophrenia Skin, disease (treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) ΙT Mental disorder (Alzheimer's disease, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) IT Intestine, disease (Crohn's, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) IT Blood vessel, disease (Raynaud's phenomenon, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) IT Heart, disease (angina pectoris, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) Bronchodilators IT (antiasthmatics, prepn. of imidazoline derivs. as tachykinin receptor antagonists) Antiarteriosclerotics IT (antiatherosclerotics, prepn. of imidazoline derivs. as tachykinin receptor antagonists) TΤ Tranquilizers and Neuroleptics (antipsychotics, prepn. of imidazoline derivs. as tachykinin receptor antagonists) IT Lung, disease (chronic obstructive, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) Mental disorder IT (dementia, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) Digestive tract ΙT (disease, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) Nervous system IT (disease, amyotrophic lateral sclerosis, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) IT Prostate gland (disease, benign hyperplasia, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) IT Bladder (disease, incontinence, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) Intestine, disease IT (irritable bowel syndrome, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) TT Headache (migraine, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) ΙT Nerve, disease (neuralgia, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) IT Nerve, disease (neuropathy, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists) IT Brain, disease (stroke, treatment; prepn. of imidazoline derivs. as tachykinin receptor antagonists)

Searcher: Shears 308-4994

ΙT

Kinin receptors

Receptors

IT

IT

IT

IT

IT

IT

IT

IT

IT

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RL: BPR (Biological process); BSU (Biological study, unclassified);
MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
   (tachykinin, prepn. of imidazoline derivs. as tachykinin receptor
   antagonists)
Kinin receptors
Receptors
RL: BPR (Biological process); BSU (Biological study, unclassified);
MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
   (tachykinin NK1, prepn. of imidazoline derivs. as tachykinin
   receptor antagonists)
Kinin receptors
Receptors
RL: BPR (Biological process); BSU (Biological study, unclassified);
MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
   (tachykinin NK2, prepn. of imidazoline derivs. as tachykinin
   receptor antagonists)
Kinins (animal hormones)
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
(Biological study)
   (tachykinins, prepn. of imidazoline derivs. as tachykinin
   receptor antagonists)
Intestine, disease
   (ulcerative colitis, treatment; prepn. of imidazoline derivs. as
   tachykinin receptor antagonists)
170567-70-1P
RL: BYP (Byproduct); PREP (Preparation)
   (byproduct; prepn. of imidazoline derivs. as tachykinin receptor
   antagonists)
170568-24-8P
RL: BYP (Byproduct); RCT (Reactant); PREP (Preparation)
   (byproduct; prepn. of imidazoline derivs. as tachykinin receptor
   antagonists)
3381-62-2P, .alpha.-(Tritylamino)phenylacetic acid
                                                    47672-25-3P,
                                         170566-34-4P
                                                        170566-35-5P
3-Phenyl-2-(tritylamino)propanoic acid
                                             170566-39-9P
170566-36-6P
               170566-37-7P
                              170566-38-8P
                                             170566-78-6P
170566-40-2P
               170566-41-3P
                              170566-77-5P
170567-38-1P
               170568-06-6P, 2-Phenyl-2-(tritylamino)-N-(2-
methoxybenzyl) ethylamine
                           170568-07-7P, 1-Phenyl-2-(tritylamino)-3-
[(2-methoxybenzyl)amino]propane
                                  170568-08-8P
                                                 170568-10-2P
170568-11-3P
               170568-12-4P
                              170568-13-5P
                                             176249-62-0P,
                                                        176249-63-1P
2-Phenyl-2-(tritylamino)-N-(2-methoxybenzyl)acetamide
                                             176249-67-5P
176249-64-2P
               176249-65-3P
                              176249-66-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
   (intermediate; prepn. of imidazoline derivs. as tachykinin
   receptor antagonists)
176249-58-4P
               176249-59-5P
                              176249-60-8P
                                             176249-61-9P
RL: BAC (Biological activity or effector, except adverse); SPN
(Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)
   (prepn. of imidazoline derivs. as tachykinin receptor
   antagonists)
64-18-6, Formic acid, reactions
                                 69-91-0, .alpha.-Aminophenylacetic
                                                    76-83-5, Trityl
       75-77-4, Trimethylsilyl chloride, reactions
          108-24-7, Acetic anhydride
                                        150-30-1,
3-Phenyl-2-aminopropanoic acid 830-03-5, p-Nitrophenyl acetate
6850-57-3, 2-Methoxybenzylamine
                                 13139-14-5
                                              13510-08-2,
.alpha.-Methyltryptophan
                           170568-31-7, 2-(4-Phenylpiperazin-1-
yl)acetic acid sodium salt
RL: RCT (Reactant)
   (starting material; prepn. of imidazoline derivs. as tachykinin
```

## receptor antagonists)

ANSWER 12 OF 34 MARPAT COPYRIGHT 1997 ACS L17 124:343106 MARPAT AN Preparation of N-aryl-N.alpha.-(indolylcarbonyl)glycineamides and TI analogs as cholecystokinin receptor agonists Bras, Jean-Pierre; De Cointet, Paul; Despeyroux, Pierre; Frehel, IN Daniel; Gully, Danielle; Maffrand, Jean-Pierre; Bignon, Eric PA Sanofi, Fr. Eur. Pat. Appl., 78 pp. so CODEN: EPXXDW PT EP 697403 A1 960221 AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, DS EP 95-401912 950818 AΤ PRAI FR 94-10165 940819 DT Patent LA French

RINRCOCHR2NHCOR3 [I; R = substituted 2-(MeO)C6H4,
-2-methoxy-3-pyridyl, -4-methoxy-5-pyrimidinyl, naphthyl; R1 =
(ar)alkyl, cycloalkyl(alkyl), alkoxyalkyl, (CH2)1-3COR4, etc.; R2 =
H, (un)substituted alkyl; R3 = naphthyl, quinolyl, indolyl, etc.; R4
= pyrrolidino, piperidino, morpholino] were prepd. as CCK-A receptor
agonists. Thus, Me2CHCH2CH2COCl was amidated by
2,6-dimethoxy-4-methylaniline and the reduced product amidated by
Me3CO2CNHCH2CO2H to give, after deprotection, N-(2,6-dimethoxy-4methylphenyl)-N-isopentylglycineamide which was amidated by
N-(methoxycarbonylmethyl)indole-2-carboxylic acid to give title
compd. II. Selected I had ED50 of lmg/kg i.p. for blockage of
gastric emptying in mice.

II

IC ICM C07D209-42

GI

ICS A61K031-395; C07D405-04; C07D215-54; C07D215-48; C07D217-26; C07D487-06; C07C237-22

- ST indolylcarbonylqlycineamide prepn cholecystokinin receptor agonist

IT Nervous system agents

(prepn. of N-aryl-N.alpha.-(indolylcarbonyl)glycineamides and analogs as cholecystokinin receptor agonists)

IT Receptors

RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL Searcher: Shears 308-4994

```
(Biological study)
        (cholecystokinin A, prepn. of N-aryl-N.alpha.-
        (indolylcarbonyl)glycineamides and analogs as cholecystokinin
        receptor agonists)
IT
     Digestive tract
        (disease, treatment; prepn. of N-aryl-N.alpha.-
        (indolylcarbonyl)glycineamides and analogs as cholecystokinin
        receptor agonists)
                                    176526-29-7P
                                                    176526-30-0P
IT
                    176526-28-6P
     176526-27-5P
                                    176526-33-3P
                                                    176526-34-4P
     176526-31-1P
                     176526-32-2P
     176526-35-5P
                     176526-36-6P
                                    176526-37-7P
                                                    176526-38-8P
     176526-39-9P
                     176526-40-2P
                                    176526-41-3P
                                                    176526-42-4P
                                                    176526-46-8P
                                    176526-45-7P
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                                                    176526-50-4P
     176526-47-9P
                     176526-48-0P
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                                                    176526-58-2P
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                                                    176526-62-8P
                                                    176526-66-2P
     176526-63-9P
                     176526-64-0P
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                     176526-68-4P
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                                    176526-73-1P
     176526-71-9P
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     176526-75-3P
     176526-79-7P
                     176526-80-0P
                                    176526-81-1P
                                                    176526-82-2P
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                                                    176527-02-9P
     176527-03-0P
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     176527-07-4P
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                                    176527-09-6P
                                                    176527-10-9P
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     176527-15-4P
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     176527-19-8P
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                                    176527-25-6P
                                                    176527-26-7P
     176527-27-8P
                     176527-28-9P
                                    176527-29-0P
                                                    176527-30-3P
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     176527-35-8P
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                                    176527-41-6P
                                                    176527-42-7P
     176527-43-8P
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                     176527-52-9P
                                    176527-53-0P
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     176527-55-2P
                     176527-56-3P
                                    176527-57-4P
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     176527-59-6P
                     176527-60-9P
                                    176527-61-0P
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                                    176527-69-8P
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     176527-71-2P
                     176527-72-3P
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     176527-79-0P
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                                    176527-89-2P
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                                    176527-93-8P
     176527-91-6P
                     176527-92-7P
                                                    176527-94-9P
                                                    176527-98-3P
     176527-95-0P
                     176527-96-1P
                                    176527-97-2P
     176527-99-4P
                     176528-00-0P
                                    176528-01-1P
                                                    176528-02-2P
     176528-03-3P
                     176528-04-4P
                                    176528-05-5P
                                                    176528-06-6P
     176528-07-7P
                     176528-08-8P
                                    176528-09-9P
                                                    176528-10-2P
     176528-11-3P
                     176528-12-4P
                                    176528-13-5P
                                                    176528-14-6P
     176528-15-7P
     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
```

(prepn. of N-aryl-N.alpha.-(indolylcarbonyl)glycineamides and

```
analogs as cholecystokinin receptor agonists)
     108-12-3, Isovaleryl chloride
IT
                                    108-94-1, Cyclohexanone, reactions
                                          700-58-3, 2-Adamantanone
     621-82-9, Cinnamic acid, reactions
                                              4179-19-5,
     1477-50-5, 1H-Indole-2-carboxylic acid
                            5452-37-9, Cyclooctylamine
                                                          13074-39-0,
     3,5-Dimethoxytoluene
                        30925-18-9, N-(tert-Butoxycarbonyl)aspartic acid
     2-Adamantanamine
                    54812-41-8, 2,6-Dimethoxy-4-methylaniline
     benzyl ester
     136382-26-8, N-(Methoxycarbonylmethyl)indole-2-carboxylic acid
     176526-26-4
     RL: RCT (Reactant)
        (prepn. of N-aryl-N.alpha.-(indolylcarbonyl)glycineamides and
        analogs as cholecystokinin receptor agonists)
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     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of N-aryl-N.alpha.-(indolylcarbonyl)glycineamides and
        analogs as cholecystokinin receptor agonists)
L17
    ANSWER 13 OF 34 MARPAT COPYRIGHT 1997 ACS
ΑN
     124:232269 MARPAT
ΤI
     Quinoline derivatives as tachykinin NK3 receptor antagonists
     Farina, Carlo; Giardina, Giuseppe Arnaldo Mari; Grugni, Mario;
IN
     Raveglia, Luca Francesco
PA
     Smithkline Beecham Farmaceutici S.P.A., Italy
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so
     PCT Int. Appl., 95 pp.
     CODEN: PIXXD2
     WO 9532948 A1 951207
PΙ
         AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
DS
         GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD,
         MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ,
         TM, TT
     RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR,
         IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
     WO 95-EP2000 950523
ΑI
PRAI IT 94-MI1099 940527
     IT 95-MI494 950314
DT
     Patent
LА
     English
GΙ
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$$R^2$$
 $R^2$ 
 $R^2$ 

NK3 receptor antagonists I [Ar = (un) substituted Ph, naphthyl, AB cycloalkadienyl, heteroaryl; R = (un)substituted alkyl, cycloalkyl, (un) substituted Ph, phenylalkyl, or heteroaryl, CO2H and derivs., etc.; R1, R2 = H, alkyl; or R1R2 = (CH2)3-5; or RR1 = (CH2)2-5; R3, R4 = H, alkyl, alkenyl, aryl, alkoxy, OH, halo, NO2, amino, etc.; R5 = alkyl, cycloalkyl, (un) substituted (hetero) aryl; X = O, S, N(CN)] are useful in treating pulmonary, CNS, and neurodegenerative disorders, etc. Approx. 115 compds. were prepd. For example, amidation of 3-methyl-2-phenylquinoline-4-carbonyl chloride with (R)-.alpha.-ethylbenzylamine gave title compd. II in 58% yield. II had IC50 of 5.6 nM for displacement of [3H]-senktide from guinea-pig cortical NK3 receptors. Antagonist activity of I was shown by inhibition of senktide-induced contraction of quinea-pig ileum. IC ICM C07D215-52 ICS A61K031-47; C07D409-04; C07D405-04; C07D401-04; C07D409-12; C07D221-18; C07D417-04; C07D401-12; C07D405-12 CC 27-17 (Heterocyclic Compounds (One Hetero Atom)) Section cross-reference(s): 1 ST quinolinecarboxamide prepn tachykinin NK3 receptor antagonist IT Allergy inhibitors Analgesics Anticonvulsants and Antiepileptics Antidepressants

(prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists)

IT Antitussives

Anxiolytics

Inflammation inhibitors Nervous system agents

Hay fever Kidney, disease Parkinsonism Psoriasis Skin, disease (treatment; prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) Mental disorder (Alzheimer's disease, treatment; prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) Bronchodilators (antiasthmatics, prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) Tranquilizers and Neuroleptics (antipsychotics, prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) Lung, disease (chronic obstructive, treatment; prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) Nervous system (disease, Huntington's chorea, treatment; prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) Nervous system (disease, degeneration, treatment; prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) Bladder (disease, incontinence, treatment; prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) (disorder, treatment; prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) Behavior (disorder, locomotor, treatment; prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) (inflammation, treatment; prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) Inflammation (neurogenic, treatment; prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) Kinin receptors Receptors RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study) (tachykinin NK3, prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) Kinins (animal hormones) RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study) (tachykinins, prepn. of quinolinecarboxamide derivs. as tachykinin NK3 receptor antagonists) 20146-25-2P, 2-(2-Furyl)quinoline-4-carboxylic acid 2-(2-Thienyl)quinoline-4-carboxylic acid 59661-86-8P. 2-Phenylquinoline-4-carboxylic acid chloride 174636-63-6P, 7-Methoxy-2-phenylquinoline-4-carboxylic acid 7-Methoxy-2-phenylquinoline-4-carboxylic acid chloride 174636-65-8P, 7-Hydroxy-2-phenylquinoline-4-carboxylic acid 174636-66-9P, 2-(2-Furyl)quinoline-4-carboxylic acid hydroiodide 174636-67-0P, 2-(4-Pyridyl)quinoline-4-carboxylic acid

Searcher: Shears 308-4994

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174636-68-1P, 2-(4-Pyridyl)quinoline-4-carboxylic
     hydrochloride
     acid chloride hydrochloride
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (intermediate; prepn. of quinolinecarboxamide derivs. as
        tachykinin NK3 receptor antagonists)
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     174636-56-7P
     174636-60-3P
                    174636-61-4P
                                   174636-62-5P
     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (prepn. of quinolinecarboxamide derivs. as tachykinin NK3
        receptor antagonists)
TT
               88-15-3, 2-Acetylthiophene
                                            91-00-9,
                             91-56-5, Isatin
                                                98-84-0,
     (Diphenylmethyl) amine
                                      98-86-2, Acetophenone, reactions
     (R,S)-.alpha.-Methylbenzylamine
                          132-60-5, 2-Phenylquinoline-4-carboxylic acid
     124-40-3, reactions
                                                   574-98-1,
                541-88-8, Chloroacetic anhydride
     2-Phthalimidoethyl bromide
                                  585-32-0, .alpha.,.alpha.-
                           1032-45-7, 8-Hydroxy-2-phenylquinoline-4-
     Dimethylbenzylamine
                       1122-54-9, 4-Acetylpyridine
     carboxylic acid
                                                      1192-62-7,
                     2627-86-3, (S)-(-)-.alpha.-Methylbenzylamine
     2-Acetylfuran
     2941-19-7, .alpha.-(n-Propyl)benzylamine 2941-20-0,
     .alpha.-Ethylbenzylamine
                                3082-64-2, (R)-.alpha.-Ethylbenzylamine
     3789-59-1, (S)-.alpha.-Ethylbenzylamine
                                               3886-69-9
                                                            4364-02-7,
     2-(4-Methoxyphenyl)quinoline-4-carboxylic acid
                                                       4584-46-7,
     2-(Dimethylamino)ethyl chloride hydrochloride
                                                      5050-41-9,
     2-Pyrrolidinoethyl chloride
                                   5407-04-5
                                               5466-31-9,
     2-(p-Chlorophenyl)quinoline-4-carboxylic acid
                                                      6633-62-1,
     6-Chloro-2-phenylquinoline-4-carboxylic acid
                                                     6668-27-5,
     .alpha.-Isopropylbenzylamine
                                     6952-34-7, 2-(4-
     Hydroxyphenyl)quinoline-4-carboxylic acid
                                                 7568-92-5,
     .alpha.-(Hydroxymethyl)benzylamine
                                          13226-98-7, (D,L)-Methyl
     phenylglycinate hydrochloride
                                     15028-39-4, (L)-Methyl
                               Searcher: Shears 308-4994
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phenylglycinate hydrochloride
                                17380-74-4, 1-Phenylcyclopentylamine
19883-41-1, (D)-Methyl phenylglycinate hydrochloride
                                                       20389-05-3,
2-(4-Methylphenyl)quinoline-4-carboxylic acid
                                                20389-09-7,
                                                20389-10-0,
2-(2-Chlorophenyl)quinoline-4-carboxylic acid
                                                21908-20-3,
2-(3-Chlorophenyl)quinoline-4-carboxylic acid
                                            24461-61-8, (R)-Methyl
2-(2-Pyrrolyl)quinoline-4-carboxylic acid
                  25611-78-3, 1-Amino-1,2-diphenylethane
phenylglycinate
                                     30081-52-8,
26682-99-5, Methyl phenylglycinate
2,3-Diphenylquinoline-4-carbonyl chloride
                                            34698-41-4, 1-Aminoindan
36710-50-6, 3-Amino-5-methyl-2-phenylquinoline-4-carboxylic acid
36735-26-9, 3-Amino-2-phenylquinoline-4-carboxylic acid
37763-23-8, (R)-Methyl (4-hydroxyphenyl)glycinate
                                                    40023-89-0,
(.alpha.-Ethyl-3, 4-dichlorobenzyl)amine
                                          43071-45-0,
3-Methyl-2-phenylquinoline-4-carboxylic acid
                                               51586-24-4,
                                       52351-75-4, 6-Methoxyisatin
.alpha.-(Trifluoromethyl)benzylamine
                                            57464-25-2,
52500-61-5, 1-Phenyl-2-hydroxypropylamine
                                              60289-68-1,
3-Bromo-2-phenylquinoline-4-carboxylic acid
                              61501-03-9, .alpha.-n-Butylbenzylamine
1-(4-Pyridyl)-n-propylamine
74788-15-1, .alpha.-n-Heptylbenzylamine
                                          74788-46-8
                                                        88831-43-0,
(R,S)-Methyl 3-amino-3-phenylpropionate hydrochloride
                                             96669-82-8,
2-(2-Thiazolyl)quinoline-4-carboxylic acid
                                                       104236-44-4
3-Phthalimido-2-phenylquinoline-4-carbonyl chloride
107635-11-0, Methyl N-methylphenylglycinate
                                              113131-95-6
132289-66-8, (D,L)-Methyl (2-thienyl)glycinate hydrochloride
148887-61-0, 2-(3,4-Dichlorophenyl)quinoline-4-carboxylic acid
174636-69-2, 3-Butyl-2-phenylquinoline-4-carbonyl chloride
174636-70-5, 3-Hexyl-2-phenylquinoline-4-carbonyl chloride
174636-71-6, 3-Methyl-2-phenylquinoline-4-carbonyl chloride
174636-72-7, 2-(2-Methoxyphenyl)quinoline-4-carbonyl chloride
174636-73-8, 2-(2-Fluorophenyl)quinoline-4-carbonyl chloride
174636-74-9, 7-Chloro-2-phenylquinoline-4-carbonyl chloride
174636-75-0, 6-Methyl-2-phenylquinoline-4-carbonyl chloride
174636-76-1, .alpha.-(Methoxymethyl)benzylamine
                                                  174636-77-2,
6-Chloro-2-phenylquinoline-4-carbonyl chloride
                                                 174636-78-3,
3-Ethyl-2-phenylquinoline-4-carbonyl chloride
                                                174636-79-4,
3-n-Propyl-2-phenylquinoline-4-carbonyl chloride
                                                   174636-80-7,
6-Bromo-3-methyl-2-(4-bromophenyl)quinoline-4-carbonyl chloride
174636-81-8, 6-Bromo-3-methyl-2-phenylquinoline-4-carbonyl chloride
174636-82-9, 6-Methoxy-2-phenylquinoline-4-carbonyl chloride
174636-83-0, 2-(2-Benzofuryl)quinoline-4-carbonyl chloride
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174636-84-1, 2-(3-Thienyl)quinoline-4-carboxylic acid
2-(2-Methylphenyl)quinoline-4-carboxylic acid
                                                174636-86-3,
2-(3,4-Methylenedioxyphenyl)quinoline-4-carboxylic acid
174636-87-4, (.alpha.-Ethyl-p-methylbenzyl)amine
                                                   174636-88-5,
2-(3-Pyrrolyl)quinoline-4-carboxylic acid
                                            174636-89-6,
(R) -. alpha. - (Phthalimidomethyl) benzylamine
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3-Chloro-2-phenylquinoline-4-carboxylic acid
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2-Cyclohexylquinoline-4-carboxylic acid
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8-Acetoxy-2-phenylquinoline-4-carboxylic acid
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2-(2,4-Dichlorophenyl)quinoline-4-carboxylic acid
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174636-95-4, 3-Methoxy-2-phenylquinoline-4-carboxylic acid chloride
174636-96-5, 5-Methyl-2-phenylquinoline-4-carboxylic acid
174636-97-6, 1-(2-Thienyl)-n-propylamine hydrochloride
174636-98-7, 3-Methyl-7-methoxy-2-phenylquinoline-4-carbonyl
           174636-99-8, 3-Methoxy-5-methyl-2-phenylquinoline-4-
chloride
carboxylic acid
RL: RCT (Reactant)
   (starting material; prepn. of quinolinecarboxamide derivs. as
   tachykinin NK3 receptor antagonists)
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ANSWER 14 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
ΑN
     124:87809 MARPAT
     Preparation of peptidylargininealdehyde derivatives as
TI
     antithrombotic agents.
     Schacht, Aaron Leigh; Shuman, Robert Theodore; Smith, Gerald Floyd;
IN
     Wikel, James Howard; Wiley, Michael Robert
PA
     Lilly, Eli, and Co., USA
SO
     PCT Int. Appl., 100 pp.
     CODEN: PIXXD2
     WO 9523809 A1 950908
PΙ
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DS
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         TT, UA
     RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR,
         IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
     WO 95-US2627 950303
ΑT
PRAI US 94-206500 940304
     US 94-318600 941005
DT
     Patent
LΑ
     English
     YCOXNHCH(COR1)(CH2)3NHC(:NH)NH2 [R1 = H; X = Pro,
AΒ
     azetidin-2-carbonyl; Y = R2ZNHCHR; R = PhCH2, Ph, cyclopentyl,
     cyclohexyl, cyclopentylmethyl, cyclohexylmethyl; Z = CO, SO, SO2; R2
     = alkyl, perfluoroalkyl, alkoxy, alkoxyalkyl, cyclopentyl,
     cyclohexyl, amino, (substituted) aryl, etc.], were prepd.
     N-(1-methylindolyl-2-carbonyl)-D-phenylalanylprolylargininealdehyde
     hydrochloride (soln. phase prepn. given) showed a thrombin time (TT)
     of 43.
TC:
     ICM C07K005-00
          C07K007-00; C07K017-00; A61K038-00; C07D417-00; C07D279-10;
          C07D279-12; C07D295-00; C07D413-00; C07D237-00; C07D237-02;
          C07D239-00; C07D239-02; C07D207-00; C07D205-00
     34-3 (Amino Acids, Peptides, and Proteins)
CC
     Section cross-reference(s): 1
     peptidylargininealdehyde prepn antithrombotic; argininealdehyde
ST
     peptidyl prepn antithrombotic
ΙT
     Anticoagulants and Antithrombotics
        (prepn. of peptidylargininealdehyde derivs. as antithrombotic
        agents)
TΤ
     Peptides, preparation
     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (prepn. of peptidylargininealdehyde derivs. as antithrombotic
        agents)
     9002-04-4, Thrombin
IT
     RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
     (Biological study)
        (inhibitors; prepn. of peptidylargininealdehyde derivs. as
        antithrombotic agents)
                    171180-53-3P
                                                   171180-58-8P
IT
     171180-52-2P
                                    171180-54-4P
                                    171180-61-3P
     171180-59-9P
                    171180-60-2P
                                                   171180-62-4P
                                    171180-65-7P
                                                   171180-66-8P
                    171180-64-6P
     171180-63-5P
                                                   171180-71-5P
     171180-67-9P
                                    171180-70-4P
                    171180-69-1P
                    171180-73-7P
                                    171180-74-8P
                                                   171180-75-9P
     171180-72-6P
     171180-76-0P
                    171180-77-1P
                                    171180-78-2P
                                                   171180-79-3P
                    171180-81-7P
                                    171180-82-8P
                                                   171180-83-9P
     171180-80-6P
                    171335-93-6P
                                                   172412-72-5P
     171180-84-0P
                                    172412-71-4P
                    172584-71-3P
                                                   172584-73-5P
                                    172584-72-4P
     172584-70-2P
                               Searcher: Shears 308-4994
```

```
RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (prepn. of peptidylargininealdehyde derivs. as antithrombotic
        agents)
ΙT
     57-66-9
               59-67-6, 3-Pyridinecarboxylic acid, reactions
                                                               75-36-5,
                                                             98-09-9,
     Acetyl chloride
                      93-10-7, 2-Quinolinecarboxylic acid
                              98-66-8, p-Chlorophenylsulfonic acid
     Phenylsulfonyl chloride
                                     109-90-0, Ethyl isocyanate
     103-80-0, Phenylacetyl chloride
                                                               407-25-0,
     124-63-0, Methanesulfonyl chloride 288-47-1, Thiazole
     Trifluoroacetic anhydride
                                501-81-5, 3-Pyridylacetic acid
     541-41-3, Ethyl chloroformate
                                    594-44-5, Ethanesulfonyl chloride
     1483-28-9, 2,5-Dimethoxyphenylsulfonyl chloride
                                                      2043-61-0,
     Cyclohexanecarboxaldehyde
                                2386-60-9, Butanesulfonyl chloride
                 2719-27-9, Cyclohexanecarbonyl chloride
                                                          5292-43-3,
     2448-45-5
     tert-Butyl bromoacetate
                              5497-76-7
                                          10147-36-1, Propanesulfonyl
               10147-37-2, Isopropylsulfonyl chloride 13360-57-1,
     chloride
     Dimethylaminosulfonyl chloride
                                     13918-92-8, 2,4-
                                      16136-58-6, N-Methylindole-2-
     Difluorophenylsulfonyl chloride
                                   18704-37-5, 8-Quinolylsulfonyl
     carboxylic acid
                      16652-71-4
                             33125-05-2, BOC-D-Phg-OH
     chloride
              18942-49-9
                                                       35897-34-8
     38870-89-2, MethoxyAcetyl chloride
                                         57224-94-9
                                                       61367-40-6
     69812-46-0 80466-79-1, 3,5-Dimethyl-4-isoxazolylsulfonyl chloride
     127095-92-5, BOC-D-Cha-OH 149217-86-7
     RL: RCT (Reactant)
        (prepn. of peptidylargininealdehyde derivs. as antithrombotic
        agents)
     98-60-2P, p-Chlorophenylsulfonyl chloride
                                                 14328-64-4P
                                 64471-88-1P, BOC-D-Phe-Pro-OBzl
     51219-18-2P
                  51219-20-6P
                  100481-09-2P, Thiazole-2-sulfonyl chloride
     96935-61-4P
     138774-74-0P
                  144206-50-8P
                                  171181-81-0P, H-D-Phe-Pro-OBzl.TFA
     171181-82-1P
                   171181-83-2P
                                  171181-84-3P
                                                 171181-85-4P
                   171181-87-6P
                                  171181-88-7P
                                                 171181-90-1P
     171181-86-5P
                   171181-94-5P
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                   171181-98-9P
                                   171336-09-7P
                                                  172348-96-8P
                  172412-73-6P
                                  172412-74-7P
                                                 172412-75-8P
     172348-97-9P
     172412-76-9P, 2-Thiazolesulfonic acid
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of peptidylargininealdehyde derivs. as antithrombotic
        agents)
    ANSWER 15 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
     124:87806 MARPAT
ΑN
     L-Arginine aldehyde peptide derivatives useful as antithrombotic
TI
     agents.
     Schacht, Aaron Leigh; Smith, Gerald Floyd; Wiley, Michael Robert
IN
     Lilly, Eli, and Co., USA
PA
     Eur. Pat. Appl., 51 pp.
so
     CODEN: EPXXDW
     EP 672659 A1 950920
PΙ
     R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE
DS
     EP 95-301390 950303
ΑI
PRAI US 94-206351 940304
DT
     Patent
     English
LA
```

IT

GI

The invention relates to L-arginine aldehyde derivs. I [X =AB prolinyl, homoprolinyl, T(CH2)aC(R')(Q)CO, etc.; T = cycloalkyl, alkyl, (un) substituted Ph or naphthyl; a = 0, 1; R' = H, alkyl; Q = OH, alkoxy, (un) substituted NH2; Y = NRCH2CO; R = cycloalkyl, optionally heteroatom-interrupted and/or substituted alkyl] and their pharmaceutically acceptable salts and/or solvates. The compds. are useful as thrombin inhibitors, coagulation inhibitors, and thromboembolic disorder agents. For example, a sequence involving N-alkylation of PhCH2CH2NH2 with BrCH2CO2Bu-tert (56%), peptide coupling with Cbz-D-hPro-OH [Cbz = carbobenzyloxy, hPro = homoproline] (56%), C-terminal deprotection (100%), peptide coupling with H-Arg(Cbz)-lactam.2HCl (53%), and redn. with LiAlH4 at -78.degree. followed by hydrogenative deprotection (53%), gave title compd. II.2HCl, a preferred compd. In a human plasma anticoagulation assay, the above compd. doubled clotting time at 64 ng/mL. It also showed an oral/i.v. activity ratio of 17% in rats. Prepns. of 19 I and their intermediates, 8 formulations, and biol. results for I are given. In vitro enzyme inhibition tests showed high selectivity for thrombin over factor Xa, trypsin, plasmin, and t-PA.

II

IC ICM C07D211-60

ICS A61K031-445; C07C311-03; C07C279-12; C07D207-16

CC 34-3 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 1

ST arginine aldehyde peptide prepn antithrombotic anticoagulant; thrombin inhibitor arginine aldehyde peptide prepn

IT Anticoagulants and Antithrombotics

Drug bioavailability

(prepn. of arginine aldehyde peptide derivs. as antithrombotics)

IT Aldehydes, preparation

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(peptide, prepn. of arginine aldehyde peptide derivs. as antithrombotics)

IT 28697-09-8P, Cbz-D-hPro-OH 51219-18-2P 51219-20-6P 66116-14-1P, Pr-Gly-OBu-tert 66116-15-2P, Isobutyl-Gly-OBu-tert 66937-52-8P 127983-07-7P, Isopropyl-Gly-OBu-tert 144206-50-8P 158679-68-6P 158679-90-4P 165197-45-5P 172316-64-2P 172316-65-3P 172316-66-4P 172316-67-5P 172316-68-6P 172316-70-0P 172316-71-1P 172316-72-2P 172316-69-7P Searcher: Shears 308-4994

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              172316-74-4P
                              172316-75-5P
                                            172316-80-2P
              172316-78-8P
                              172316-79-9P
172316-77-7P
                                            172316-84-6P
                              172316-83-5P
172316-81-3P
              172316-82-4P
                                            172316-88-0P
                              172316-87-9P
172316-85-7P
              172316-86-8P
                              172316-91-5P
                                            172316-92-6P
172316-89-1P
              172316-90-4P
172316-93-7P
              172316-94-8P
                              172316-95-9P
                                            172316-96-0P
                              172316-99-3P
                                            172317-00-9P
172316-97-1P
              172316-98-2P
                              172317-03-2P
                                            172317-04-3P
172317-01-0P
              172317-02-1P
                              172317-07-6P
                                            172317-08-7P
172317-05-4P
              172317-06-5P
                              172317-11-2P
                                            172317-12-3P
172317-09-8P
              172317-10-1P
172317-13-4P
              172317-14-5P
                              172317-15-6P
                                            172317-16-7P
172317-17-8P, Et-Gly-OBu-tert 172317-18-9P 172317-19-0P,
EtSO2-D-Phe-OH
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
   (intermediate; prepn. of arginine aldehyde peptide derivs. as
   antithrombotics)
              172316-47-1P
                              172316-48-2P 172316-49-3P
172316-46-0P
172316-50-6P
              172316-51-7P 172316-52-8P 172316-53-9P
             172316-55-1P
                             172316-56-2P
                                            172316-57-3P
172316-54-0P
              172316-59-5P
                              172316-60-8P
                                            172316-61-9P
172316-58-4P
                              172487-12-6P
                                            172487-13-7P
172316-62-0P
              172316-63-1P
              172487-15-9P
                             172487-16-0P
                                            172487-17-1P
172487-14-8P
RL: BAC (Biological activity or effector, except adverse); SPN
(Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)
   (prepn. of arginine aldehyde peptide derivs. as antithrombotics)
                     9002-04-4, Thrombin
                                           9002-05-5, Factor Xa
9001-90-5, Plasmin
                    139639-23-9, Tissue plasminogen activator
9002-07-7, Trypsin
RL: BPR (Biological process); BIOL (Biological study); PROC
   (prepn. of arginine aldehyde peptide derivs. as antithrombotics)
62-53-3, Benzenamine, reactions 64-04-0, Phenethylamine
                        75-31-0, Isopropylamine, reactions
Ethylamine, reactions
78-81-9, Isobutylamine
                         95-53-4, o-Methylaniline, reactions
104-53-0, 3-Phenylpropionaldehyde 105-36-2, Ethyl bromoacetate
                                   107-85-7, Isoamylamine
107-10-8, n-Propylamine, reactions
501-53-1, Benzyl chloroformate 594-44-5, Ethanesulfonyl chloride
                                                1723-00-8,
673-06-3, H-D-Phe-OH
                      1148-11-4, Cbz-L-Pro-OH
H-D-HPro-OH
              2495-35-4, Benzyl acrylate
                                          5292-43-3, tert-Butyl
bromoacetate
               5664-21-1, Cyclohexylacetaldehyde
                                                  5680-79-5,
Glycine methyl ester hydrochloride 6404-31-5, Cbz-D-Pro-OH
                        6937-16-2, Ethyl 4-aminobutyrate
6436-90-4, Bn-Gly-OEt
                                       14660-52-7, Ethyl
hvdrochloride
                13200-60-7, Me-Gly-OEt
                  27532-96-3, Glycine tert-butyl ester hydrochloride
5-bromovalerate
             39608-31-6, Cbz-Sar-OH 52605-49-9, Sarcosine ethyl
35897-34-8
ester hydrochloride
RL: RCT (Reactant)
   (starting material; prepn. of arginine aldehyde peptide derivs.
   as antithrombotics)
ANSWER 16 OF 34 MARPAT COPYRIGHT 1997 ACS
123:339728 MARPAT
Non-peptide tachykinin receptor antagonists
Cho, Sung-Yong Stephen; Crowell, Thomas Alan; Gitter, Bruce Donald;
Hipskind, Philip Arthur; Howbert, James Jeffry; Krushinski, Joseph
Herman, Jr.; Lobb, Karen Lynn; Muehl, Brian Stephen; Nixon, James
Arthur
Lilly, Eli, and Co., USA
PCT Int. Appl., 152 pp.
CODEN: PIXXD2
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IT

IT

IT

L17

ΑN

TI

IN

PA SO

ΡI WO 9514017 Al 950526 AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, DS GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG ΑI WO 94-US13222 941116 PRAI US 93-153847 931117 DT Patent LА English CASREACT 123:339728 os GI

AB

The invention provides a novel series of non-peptide compds. I [m, n, p = 0, 1; q = 0, 1, 2; R = (un)substituted Ph, 2- or 3-indolyl or-indolinyl, benzothienyl, benzofuranyl, or naphthyl; R1 = (un) substituted trityl, Ph, PhO, PhS, piperazinyl, piperidinyl, pyrrolidinyl, morpholinyl, indolyl, amino, H, leaving group, etc.; R2 = H, alkyl, arylsulfonyl, alkylsulfonyl, carboxyalkyl, alkoxycarbonylalkyl, acyl; R3 = H, (un)substituted Ph, phenylalkyl, (cyclo)alk(en)yl, naphthyl; R4 = H, alkyl; R3 .noteq. H or alk(en)yl if R1 = H or halo] and their salts and solvates. The compds. are useful in the treatment or prevention of physiol. disorders assocd. with excess tachykinins. This invention also provides methods of treatment and pharmaceutical formulations employing I. Over 170 examples were prepd. and tested for biol. activity, and 11 formulations are described. For instance, activation of N-(tert-butoxycarbonyl)tryptophan with carbonyldiimidazole (CDI) and reaction with 2-MeOC6H4CH2NH2 gave 80.8% of the corresponding 2-methoxybenzylamide, which was deprotected (94.2%), reduced at the amide carbonyl with BH3.SMe2, coupled with Na 2-(4-phenylpiperazin-1yl)acetic acid using CDI, and N-acylated with ClCO2Et and Et3N, to give title compd. II. This compd. had IC50 values of 1.7 and 1000 nM for binding to human NK-1 and NK-2 receptors, resp., in cultured cell assays.

```
IC
     ICM C07D403-12
         C07D401-12; C07D401-14; C07D413-12; C07D409-12; C07D295-15;
     ICS
          C07D223-04; C07D209-20; C07C211-10; C07C233-76; C07C233-78;
          A61K031-495; A61K031-445; A61K031-40; A61K031-55; A61K031-535;
          A61K031-475; A61K031-505; A61K031-44; A61K031-165
CC
     27-11 (Heterocyclic Compounds (One Hetero Atom))
     Section cross-reference(s): 1, 34
     indole nonpeptide tachykinin receptor antagonist prepn
ST
    Analgesics
    Antidepressants
    Anxiolytics
        (prepn. of non-peptide tachykinin receptor antagonists)
IT
    Down's syndrome
    Multiple sclerosis
     Psoriasis
     Schizophrenia
        (treatment; prepn. of non-peptide tachykinin receptor
        antagonists)
IT
    Mental disorder
        (Alzheimer's disease, treatment; prepn. of non-peptide tachykinin
        receptor antagonists)
IT
     Respiratory distress syndrome
        (adult, treatment; prepn. of non-peptide tachykinin receptor
        antagonists)
IT
     Inflammation inhibitors
        (antiarthritics, prepn. of non-peptide tachykinin receptor
        antagonists)
IT
     Bronchodilators
        (antiasthmatics, prepn. of non-peptide tachykinin receptor
        antagonists)
     Tranquilizers and Neuroleptics
IT
        (antipsychotics, prepn. of non-peptide tachykinin receptor
        antagonists)
IT
     Inflammation inhibitors
        (antirheumatics, prepn. of non-peptide tachykinin receptor
        antagonists)
IT
     Pneumonia
        (broncho-, treatment; prepn. of non-peptide tachykinin receptor
        antagonists)
IT
    Mental disorder
        (dementia, treatment; prepn. of non-peptide tachykinin receptor
        antagonists)
IT
     Nervous system
        (disease, amyotrophic lateral sclerosis, treatment; prepn. of
        non-peptide tachykinin receptor antagonists)
     Connective tissue
IT
        (disease, fibrositis, treatment; prepn. of non-peptide tachykinin
        receptor antagonists)
IT
     Bladder
        (disease, incontinence, treatment; prepn. of non-peptide
        tachykinin receptor antagonists)
IT
        (diseases, spasm, treatment; prepn. of non-peptide tachykinin
        receptor antagonists)
IT
     Intestine, disease
        (irritable bowel syndrome, treatment; prepn. of non-peptide
        tachykinin receptor antagonists)
IT
     Kinins (animal hormones)
     RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
     (Biological study)
                               Searcher: Shears 308-4994
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```
(neuro-, prepn. of non-peptide tachykinin receptor antagonists)
IT
     Brain, disease
        (stroke, treatment; prepn. of non-peptide tachykinin receptor
        antagonists)
ΙT
     Kinin receptors
     Receptors
     RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
     (Biological study)
        (tachykinin, prepn. of non-peptide tachykinin receptor
        antagonists)
IT
     Kinin receptors
     Receptors
     RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
     (Biological study)
        (tachykinin NK1, prepn. of non-peptide tachykinin receptor
        antagonists)
IT
     Kinin receptors
     Receptors
     RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
     (Biological study)
        (tachykinin NK2, prepn. of non-peptide tachykinin receptor
        antagonists)
TT
     Kinins (animal hormones)
     RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL
     (Biological study)
        (tachykinins, prepn. of non-peptide tachykinin receptor
        antagonists)
IT
     170568-24-8P
     RL: BYP (Byproduct); PREP (Preparation)
        (byproduct; prepn. of non-peptide tachykinin receptor
        antagonists)
IT
     170567-77-8P
     RL: BYP (Byproduct); RCT (Reactant); PREP (Preparation)
        (byproduct; prepn. of non-peptide tachykinin receptor
        antagonists)
IT
     47738-79-4P
                   170568-11-3P
                                   170568-12-4P
                                                  170568-13-5P
     170568-14-6P
                    170568-15-7P
                                    170568-16-8P
                                                   170568-17-9P
     170568-18-0P
                    170568-19-1P
                                    170568-20-4P
                                                   170568-21-5P
     170568-22-6P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (intermediate; prepn. of non-peptide tachykinin receptor
        antagonists)
                                                   170566-37-7P
IT
     170566-34-4P
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                                    170566-36-6P
     170566-38-8P
                    170566-39-9P
                                    170566-40-2P
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                                    170566-44-6P
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     170566-46-8P
                    170566-47-9P
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                    170566-55-9P
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                    170566-71-9P
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                                    170567-04-1P
                                Searcher: Shears 308-4994
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                                   170567-36-9P
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     170567-34-7P
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                    170567-39-2P
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     170567-42-7P
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                    170567-51-8P
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     study); PREP (Preparation); USES (Uses)
        (prepn. of non-peptide tachykinin receptor antagonists)
                                89-98-5, 2-Chlorobenzaldehyde
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     76-83-5, Trityl chloride
     2-Methoxybenzaldehyde
                             541-41-3, Ethyl chloroformate
                                                              598-21-0,
                           624-83-9, Methyl isocyanate
     Bromoacetyl bromide
                                                          6720-02-1,
                        6850-57-3, 2-Methoxybenzylamine
                                                           13139-14-5
     Tryptophan amide
     17766-28-8, 1-Cyclohexylpiperazine 24424-99-5, Di-tert-butyl
                   119378-70-0
                                 170568-23-7
                                                170568-31-7
     dicarbonate
     RL: RCT (Reactant)
        (starting material; prepn. of non-peptide tachykinin receptor
        antagonists)
    ANSWER 17 OF 34 MARPAT COPYRIGHT 1997 ACS
     123:306600 MARPAT
    Antithrombotic L-arginine aldehyde derivatives
     Chirgadze, Nickolay Yuri; Schacht, Aaron Leigh; Smith, Gerald Floyd;
    Willey, Michael Robert
    Lilly, Eli, and Co., USA
     PCT Int. Appl., 129 pp.
     CODEN: PIXXD2
    WO 9523608 A1 950908
        AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
         GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG,
         MN, MW, MX, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ,
         TT, UA
     RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR,
         IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
    WO 95-US2552 950303
PRAI US 94-207491 940304
     Patent
                               Searcher: Shears 308-4994
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LА
     English
AB
     L-arginine aldehyde derivs. XYNHCH(CHO)(CH2)3NHC(:NH)NH2 [X =
    prolyl, homoprolyl, substituted cycloalkylalkanoyl, (substituted)
     isoquinolinecarbonyl, etc.; Y = substituted prolyl] are prepd. for
     use as thrombin inhibitors, coagulation inhibitors, and
     thromboembolic disorder agents. Thus, the plasma thrombin time in
     rats was doubled by D-homoprolyl-L-cis-4-methylprolyl-L-argininal-
     2HCl (I) at 60 ng/mL. I was prepd. by stepwise condensation of
     Cbz-D-homoproline, 4-cis-methylproline Et ester (prepd. from
     Cbz-4-trans-Hyp Et ester), and Arg(Cbz) lactam-2HCl [prepd. from
     Boc-Arg(Cbz)], redn. with LiAl(OCMe3)3, and hydrogenolysis over
     Pd/C.
IC
     ICM A61K038-00
         C07K005-00; C07K007-00; C07K017-00; C07D223-16; C07D251-00;
     ICS
          C07D251-40; C07D239-00; C07D237-00; C07D471-00; C07D487-00;
          C07D417-00; C07D285-00; C07D513-00; C07D285-08; C07D285-14;
          C07D277-04; C07D277-18; C07D277-38; C07D275-02
CC
     1-8 (Pharmacology)
     Section cross-reference(s): 34
ST
     argininal deriv prepn antithrombotic
    Anticoagulants and Antithrombotics
IT
        (antithrombotic arginine aldehyde derivs.)
IT
     169819-73-2P
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        (antithrombotic arginine aldehyde derivs.)
IT
               94-18-8, Benzyl 4-hydroxybenzoate
                                                    99-06-9.
     51 - 35 - 4
     3-Hydroxybenzoic acid, reactions
                                        100-02-7, 4-Nitrophenol,
                 100-39-0, Benzyl bromide
                                            108-95-2, Phenol, reactions
     reactions
     486-73-7, 1-Isoquinolinecarboxylic acid
                                                554-84-7
                                                           673-06-3,
                       883-40-9, Diphenyldiazomethane
     D-Phenylalanine
                                                         1530-32-1,
    Ethyltriphenylphosphonium bromide
                                         1723-00-8, D-Homoproline
     1779-49-3, Methyltriphenylphosphonium bromide
                                                      5292-43-3,
                                6228-47-3, Propyltriphenylphosphonium
     tert-Butyl bromoacetate
                            16721-45-2
                                         18942-49-9, BOC-D-phenylalanine
               13504-85-3
    bromide
     28322-40-9, Isoamyltriphenylphosphonium bromide
                                                       33125-05-2
                  79815-20-6, (S)-Indoline-2-carboxylic acid
                                                               93967-76-1
     35897-34-8
     169820-89-7
     RL: RCT (Reactant)
        (antithrombotic arginine aldehyde derivs.)
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                                Searcher: Shears 308-4994
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     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (antithrombotic arginine aldehyde derivs.)
     9002-04-4, Thrombin
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (inhibitors; antithrombotic arginine aldehyde derivs.)
    ANSWER 18 OF 34 MARPAT COPYRIGHT 1997 ACS
     123:279761 MARPAT
    Hydroxyethylamino sulfonamides useful as retroviral protease
     inhibitors
    Vazquez, Michael L.; Mueller, Richard A.; Talley, John J.; Getman,
     Daniel P.; Decrescenzo, Gary A.; Freskos, John N.; Bertenshaw,
    Deborah E.; Heintz, Robert M.
     Searle, G. D., and Co., USA; Monsanto Co.
    PCT Int. Appl., 255 pp.
    CODEN: PIXXD2
    WO 9506030 A1 950302
        AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB,
        GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW,
        NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, US,
        UZ, VN
    RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR,
        IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
    WO 94-US9139 940823
PRAI US 93-110911 930824
    US 94-204827 940302
    Patent
    English
    Hyroxethylamino sulfonamide compds. AC(:Y)NR6CHR2CHOHCH2NR3S(:O)xR4
     [I: R2=(substituted)alkyl, aryl, cycloalkyl, cycloalkylalkyl,
     aralkyl; R3=H; R3,R4=R2, alkenyl, alkynyl, heterocycloalkyl, -aryl,
     -aralkyl, -cycloalkyalkyl; R6=H, alkyl; x=1,2; Y=O, S; A=RO, R;
    R=alkyl, alkenyl; (hetero)aryl, cycloalkyl, cycloalkylalkyl,
     aralkyl, NH2, mono- or disubstituted amino, etc.] are effective as
     retroviral protease inhibitors, and in particular as inhibitors of
    HIV protease. Many inhibitors were prepd. by (1) prepg. an
    N-protected amino epoxide and (2) reacting this with an amine and
     (3) prepg. a sulfonamide by reacting with a sulfonyl chloride or
     sulfonyl anhydride in the presence of an acid scavenger.
                                                               The amino
     function of the sulfonamide was then (4) deprotected and (5) reacted
     with a carboxylate. In vitro HIV protease assays with these compds.
     revealed inhibitors with IC50's as low as 1.4 nM, e.g.
     [1S-[1R*(S*),2S*]]-I (A=p-MeOC6H4CH2OCONHCH2CHMe; Y=O; R6=H;
     R2=benzyl; R3=3-methylbutyl; x=2; R4=phenyl).
     ICM C07C311-29
                               Searcher: Shears 308-4994
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C07D213-30; C07C317-14; C07C311-18; C07D307-79; C07K005-062;
          A61K031-18; A61K031-44
CC
     7-3 (Enzymes)
     retrovirus protease inhibitor hydroxyethylamino sulfonamide; HIV
ST
     protease inhibitor hydroxyethylamino sulfonamide
IT
     144114-21-6, Retropepsin
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (HIV; hydroxyethylamino sulfonamides useful as retroviral
        protease inhibitors)
IT
     169280-63-1P
     RL: BAC (Biological activity or effector, except adverse); RCT
     (Reactant); SPN (Synthetic preparation); BIOL (Biological study);
     PREP (Preparation)
        (hydroxyethylamino sulfonamides useful as retroviral protease
        inhibitors)
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IT
     1975-51-5P, 4-Nitro-2-methylbenzoic acid
     157566-75-1P
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     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
        (hydroxyethylamino sulfonamides useful as retroviral protease
        inhibitors)
                                     63-91-2, L-Phenylalanine, reactions
IT
     62-56-6, Thiourea, reactions
                                        75-77-4, reactions
                                                              78-81-9,
     74-89-5, Methylamine, reactions
                     79-08-3, Bromoacetic acid
                                                  79-37-8, Oxalyl chloride
     Isobutylamine
     87-62-7, 2,6-Dimethylaniline
                                     95-48-7, reactions
                                                          96-34-4, Methyl
                                Searcher: Shears 308-4994
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chloroacetate
                98-09-9, Benzenesulfonyl chloride
                                                   98-68-0,
                                   98-74-8, 4-Nitrobenzene sulfonyl
4-Methoxybenzenesulfonyl chloride
          100-39-0, Benzyl bromide 100-55-0, 3-Pyridylcarbinol
                                  105-36-2, Ethyl bromoacetate
105-13-5, 4-Methoxybenzyl alcohol
107-31-3, Methyl formate
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3-Nitrobenzene sulfonyl chloride
                                  124-63-0, Methanesulfonyl
chloride
          274-09-9, 1,3-Benzodioxole
                                        496-16-2,
                        506-59-2, Dimethylamine hydrochloride
2,3-Dihydrobenzofuran
541-88-8, Chloroacetic anhydride
                                   576-26-1
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3-Hydroxy-2-methylbenzoic acid
                                619-45-4, Methyl p-aminobenzoate
632-46-2, 2,6-Dimethylbenzoic acid
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1118-68-9, N,N-Dimethylglycine
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2304-96-3, N-Carbobenzoxy-L-asparagine
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Propanesulfonyl chloride
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            24424-99-5, Di-tert-butyldicarbonate
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                      25512-62-3, Cyclohexenone
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            39178-35-3, Isonicotinoyl chloride hydrochloride
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52130-17-3, 3-Amino-2-methylbenzoic acid
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RL: RCT (Reactant)
   (hydroxyethylamino sulfonamides useful as retroviral protease
   inhibitors)
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13335-71-2P, 2,6-Dimethylphenoxyacetic acid
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5-thiazolecarboxylate
                        38585-74-9P, 5-Thiazolemethanol
                                       50850-93-6P
                                                    54781-19-0P,
39658-41-8P, Ethyl 6-aminonicotinate
                                         60427-77-2P
                                                      83509-04-0P
2-Trimethylsilyloxy-1,3-cyclohexadiene
                             111060-64-1P
                                            115010-10-1P,
84575-50-8P
             111060-52-7P
                                      115010-11-2P
                                                      127927-43-9P
1,3-Benzodioxole-5-sulfonyl chloride
127943-39-9P
              128018-43-9P
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                                           132605-93-7P
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              132605-98-2P
                              132696-45-8P
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                                            157566-91-1P
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              157446-10-1P
              157567-13-0P
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157567-12-9P
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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
   (hydroxyethylamino sulfonamides useful as retroviral protease
   inhibitors)
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L17 ANSWER 19 OF 34 MARPAT COPYRIGHT 1997 ACS

AN 123:169940 MARPAT

IT

TI Enzymic reduction method for the preparation of compounds useful for preparing taxanes

IN Patel, Ramesh N.; Banerjee, Amit; McNamee, Clyde G.; Thottathil,
John K.; Szarka, Laszlo J.
Searcher: Shears 308-4994

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PA
     Squibb, E. R., and Sons, Inc., USA
so
     U.S., 13 pp.
     CODEN: USXXAM
     US 5420337 A
                    950530
PΙ
     US 92-975453 921112
ΑI
DT
     Patent
LА
     English
     CASREACT 123:169940
os
     RR1CHCOCO2R2 [R = aryl; R1 = (un)protected NH2, N3; R2 = H, alkyl,
AΒ
     aryl, cycloalkyl, alkenyl, alkynyl, cycloalkenyl] were prepd. as
     substartes for enzymic redn. in the prepn. of intermediates for the
     taxane side chain. Thus, DL-H2NCHPhCO2H was N-benzoylated, treated
     with EtO2CCOCl, and hydrolyzed to give (.+-.)-BzNHCHPhCOCO2Et which
     was reduced with Hansenula polymorpha to give (2R,3S)-(-)-
     BzNHCHPhCH(OH)CO2Et in 98% yield with 99.5% optical purity.
IC
     ICM C07C229-28
    560041000
NCL
     30-20 (Terpenes and Terpenoids)
CC
     Section cross-reference(s): 34
     benzoylphenylisoserine enzymic stereoselective prepn; taxane
ST
     intermediate benzoylphenylisoserine enzymic prepn;
     bezoylaminooxophenylpropionate stereoselective redn Hansenula
     Hansenula polymorpha
IT
        (stereoselective prepn. of the taxane side chain intermediates by
        enzymic redn.)
IT
     Reduction
        (enzymic, stereoselective prepn. of the taxane side chain
        intermediates by enzymic redn.)
IT
     1605-68-1P, Taxane
                          33069-62-4P, Taxol
     RL: PNU (Preparation, unclassified); PREP (Preparation)
        (stereoselective prepn. of the taxane side chain intermediates by
        enzymic redn.)
IT
     2835-06-5, DL-Phenylglycine
     RL: RCT (Reactant)
        (stereoselective prepn. of the taxane side chain intermediates by
        enzymic redn.)
                                              167095-12-7P
                                                              167095-13-8P
IT
     28065-66-9P, DL-N-Benzoylphenylglycine
     167095-14-9P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (stereoselective prepn. of the taxane side chain intermediates by
        enzymic redn.)
IT
     153433-80-8P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (stereoselective prepn. of the taxane side chain intermediates by
        enzymic redn.)
    ANSWER 20 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
     123:9927 MARPAT
AN
ΤI
     Preparation of cis-epoxide peptide derivatives useful as
     irreversible HIV protease inhibitors.
TN
     Kim, Sung Chun; Choy, Nakyen; Lee, Chang Sun; Son, Young Chan; Choi,
     Hoil; Koh, Jong Sung; Yoon, Heungsik; Park, Chi Hyo; Kim, Sang Soo
PA
     Lucky Ltd., S. Korea
SO
     Eur. Pat. Appl., 95 pp.
     CODEN: EPXXDW
PΙ
     EP 601486 Al 940615
        AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
DS
         SE
     EP 93-119458 931202
AΤ
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Searcher: Shears 308-4994

PRAI KR 92-23088 921202

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KR 92-23089 921202

KR 93-10811 930614

KR 93-21298 931014

KR 93-21299 931014

KR 93-21300 931014

DT Patent

LA English

GI
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160742-23-4P

160742-27-8P

160742-24-5P

160742-28-9P

AHN
$$Q^{2} = \begin{bmatrix}
R^{6} \\
N \\
H
\end{bmatrix}$$

$$R^{7}$$

$$R^{7}$$

Title compds. [I; R1 = cycloalkyl, arylalkyl; A = Q1; R2 = AΒ (amide-substituted) alkyl; R3 = alkoxy, aryloxyalkyl, arylalkoxy, N-contg. arom. radical, N-contg. arom. radical-substituted alkoxy, amino; B = Q2; R6 = alkyl, aralkyl, amide-substituted alkyl; R7 = alkoxy, alkylamino, alkoxyamino, dialkylamino, etc.; m = 0,1; n = 1,2], were prepd. Thus, N-[5-L-(N-benzyloxycarbonylamino)-(4R,3S)epoxy-6-phenylhexanoyl]isoleucine Me ester (prepn. given) was hydrogenolyzed in MeOH over Pd/C; the residue was coupled with N-(2-quinolinecarbonyl)asparagine using EDC/HOBT/Et3N in DMF to give N-[5-L-[[N-(2-quinolinecarbonyl)asparaginyl]amino]epoxy-6phenylhexanoyl]isoleucine Me ester. The latter inhibited HIV protease with KI = 0.018 .mu.M, and inhibited HIV proliferation in cell culture with IC50 = 0.2 .mu.M. ICM C07K005-02 IC C07K007-02; C07K005-06; C07D303-36; C07D303-46; A61K037-64; A61K031-335; C07C271-20; C07C271-22; C07D303-38; C07D493-08 CC 34-3 (Amino Acids, Peptides, and Proteins) Section cross-reference(s): 1 ST peptide epoxide prepn hiv protease inhibitor IT Virucides and Virustats (epoxypeptide derivs., for HIV infections) IT Virus, animal (human immunodeficiency, infection by, treatment of, epoxypeptide derivs. for) IT 144114-21-6, Retropepsin RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (HIV, inhibitors, epoxypeptide derivs.) IT 160742-15-4P 160742-16-5P 160742-17-6P 160742-18-7P 160742-19-8P 160742-20-1P 160742-21-2P 160742-22-3P

160742-25-6P

160742-29-0P

Searcher: Shears 308-4994

160742-26-7P

160742-30-3P

160742-34-7P

160742-33-6P

160742-31-4P

160742-32-5P

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     RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL
     (Biological study); PREP (Preparation); USES (Uses)
        (prepn. of, as HIV protease inhibitor)
IT
                                                  4083-58-3P
                                                               7484-37-9P
     1828-66-6P, 4-Morpholinesulfonyl chloride
                                                51987-73-6P
                                                              58521-45-2P
                   35909-92-3P
                                  51600-25-0P
     21035-59-6P
                                                68906-27-4P
                                                              72155-45-4P
     59830-60-3P
                   63096-02-6P
                                  65273-64-5P
                   97589-56-5P
                                  101669-42-5P
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     160865-42-9P
     RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic
     use); BIOL (Biological study); PREP (Preparation); USES (Uses)
        (prepn. of, as intermediate for HIV protease inhibitor)
IT
     56-41-7, Alanine, reactions
                                    63-91-2, Phenylalanine, reactions
                                        78-82-0, Isobutyronitrile
     74-89-5, Methylamine, reactions
                                           100-02-7, 4-Nitrophenol,
     93-10-7, 2-Quinolinecarboxylic acid
                            574-98-1, N-(2-Bromoethyl)phthalimide
     reactions
                 100-59-4
     586-98-1, 2-Pyridinecarbinol
                                     637-59-2, 1-Bromo-3-phenylpropane
     676-58-4, Methylmagnesium chloride
                                          1121-60-4,
                                1142-20-7, Z-Ala-OH
                                                       1149-26-4, Z-Val-OH
     2-Pyridinecarboxaldehyde
     1152-61-0, Z-Asp-OH
                           1462-75-5, 3-Phenylpropylmagnesium bromide
     1589-82-8, Benzylmagnesium bromide
                                           2304-96-3, Z-Asn-OH
                                           2650-64-8, Z-Gln-OH
     2577-46-0, Isoleucine methyl ester
     2976-75-2, 1-Naphthoxyacetic acid
                                          3160-59-6, Z-Ile-OH
                                                                 3277-89-2,
                                       4497-04-5, 4-Morpholinepropanoic
     2-Phenylethylmagnesium bromide
                        13139-15-6, BOC-Leu-OH
                                                  13734-34-4, BOC-Phe-OH
            5680-86-4
     acid
     17609-47-1, Valine ethyl ester hydrochloride
                                                     42807-91-0
                                Searcher: Shears 308-4994
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52103-13-6
                  54745-92-5, Quinoxaline-2-carbonyl chloride
                 70240-41-4
     63096-02-6
                              90878-19-6
                                          105852-47-9
                                                         126456-43-7
                  160742-91-6
                                160742-92-7
                                              160742-93-8
                                                           160865-39-4
     136465-98-0
    RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study);
    USES (Uses)
        (reaction of, in prepn. of epoxypeptide deriv. HIV protease
       inhibitor)
L17 ANSWER 21 OF 34 MARPAT COPYRIGHT 1997 ACS
     122:82085 MARPAT
    Preparation of acyclic peptides as cardiovascular agents
     (natriuretics).
    Voges, Klaus Peter; Henning, Rolf; Huebsch, Walter; Lenfers, Jan
    Bernd; Beuck, Martin; Theiss, Gudrun; Stasch, Johannes Peter;
    Hirth-Dietrich, Claudia
    Bayer A.-G., Germany
    Ger. Offen., 73 pp.
    CODEN: GWXXBX
    DE 4242946 A1 940623
    DE 92-4242946 921218
    Patent
    German
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *
    R1COABDEGR2 [A = bond, Q1, Q2, Q3; a, b, d, f = 1,2; e = 0-2; R3,
    R10, R26 = H, alkyl, protecting group; R4, R5, R11, R12, R27, R28 =
    H, Me, etc.; R4R5, R11R12 = atoms to form a 5-6 membered carbocycle;
    B = Q4, Q5, Q6, etc.; j = 0-4; g = 1-3; R9 = H, protecting group; D,
    E, G = B, Q7; R1 = alkyl, pyridyl, quinolyl, etc.; R2 = Q8; k, l =
     0-2; R29, R30 = H, protecting group, (substituted) alkyl], were
     prepd. as natriuretics (no data). Thus, title compd. (I) was prepd.
     on Tentagel-S-NH2 resin using FMOC-protected amino acids.
     ICM C07K007-06
     ICS C07K007-02; A61K037-02
     34-3 (Amino Acids, Peptides, and Proteins)
     Section cross-reference(s): 1
    peptide acyclic prepn natriuretic; cardiovascular agent acyclic
    peptide prepn
    Antihypertensives
     Cardiovascular agents
        (acyclic peptides)
     Peptides, preparation
     RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL
     (Biological study); PREP (Preparation); USES (Uses)
        (prepn. of, as cardiovascular agents)
     Diuretics
        (natriuretics, acyclic peptides)
     160344-78-5P
                  160344-79-6P
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                                                 160344-81-0P
     160344-82-1P
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Searcher: Shears 308-4994

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                                  160346-04-3P
     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
        (prepn. of, as cardiovascular agent)
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                                               160346-06-5P
     160346-07-6P
                   160346-08-7P
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                                               160346-10-1P
     160346-11-2P
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     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of, as intermediate for acyclic peptide cardiovascular
        agent)
     96-15-1, 2-Methylbutylamine
                                  2243-83-6, 2-Naphthoyl chloride
                              5438-70-0, Ethyl 4-aminophenylacetate
     2480-93-5, BOC-Orn(Z)-OH
     7536-58-5
                15761-39-4, BOC-Pro-OH
                                        18598-74-8,
     H-Ile-OMe.hydrochloride
                              71989-14-5, FMOC-Asp(OtBu)-OH
     71989-23-6, FMOC-Ile-OH
                              71989-31-6, FMOC-Pro-OH
                                                      109425-55-0,
     FMOC-orn (BOC) -OH
     RL: RCT (Reactant)
        (reaction of, in prepn. of acyclic peptide cardiovascular agent)
L17 ANSWER 22 OF 34 MARPAT COPYRIGHT 1997 ACS
     122:82084 MARPAT
     Preparation of sulfur-containing peptides as antihypertensives.
    Voges, Klaus Peter; Henning, Rolf; Lenfers, Jan Bernd; Dressel,
     Juergen; Beuck, Martin; Theiss, Gudrun; Stasch, Johannes Peter;
     Hirth-Dietrich, Claudia; Bischoff, Erwin
     Bayer A.-G., Germany
     Ger. Offen., 37 pp.
     CODEN: GWXXBX
    DE 4242945 A1 940623
    DE 92-4242945 921218
     Patent
     German
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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *
     R1COABDEGR2 [A = bond, Q1, Q2, Q3; a, b, d, f = 1, 2; e, e' = 0-2;
AB
     R1 = alkyl, pyridyl, quinolyl, etc.; R3, R10, R19 = H, alkyl,
     protecting group; R4, R5 = H, Me; or R4 = H, R5 = H, cycloalkyl,
     aryl, (substituted) alkyl; R4R5C = 5- or 6-membered satd.
     carbocycle; B = Q4-Q8; g = 1-3; j = 0-4; R9 = H, acyl, protecting
     group; D, E, G = B, Q9; R11, R12 = R4, R5; R2 = Q10; q, r = 0-2;
     R20, R21 = R4, R5; R22, R23 = protecting group, H, (substituted)
     alkyl; .gtoreg. 1 of A, D, E, G = S-contg. amino acid residue, or R1
     = S-contq. functional group], were prepd. as antihypertensives (no
     data). Title compds. are natriuretics with increased affinity for
     ANP receptors. Thus, title compd. I was prepd. by solid phase
     synthesis using FMOC-protected amino acids on Tentagel-S-NH2 resin.
     ICM C07K007-06
TC
     ICS A61K037-02; C07K007-02
     34-3 (Amino Acids, Peptides, and Proteins)
CC
     Section cross-reference(s): 1
     peptide sulfur contg prepn antihypertensive; natriuretic reduced
ST
     basicity peptide sulfur contg
ΙT
     Antihypertensives
        (sulfur-contg. peptides)
IT
     Diuretics
        (natriuretics, sulfur-contg. peptides)
IT
     Peptides, preparation
     RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL
     (Biological study); PREP (Preparation); USES (Uses)
        (sulfur-contg., prepn. of, as natriuretics)
IT
     27144-18-9P
                   64566-56-9P
                                 81196-09-0P
                                               103725-76-4P
                                                  160344-73-0P
     160344-70-7P
                    160344-71-8P
                                   160344-72-9P
     160344-74-1P
                    160344-75-2P
                                   160344-76-3P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of, as intermediate for peptide deriv. natriuretic)
IT
     160344-16-1P
                    160344-17-2P
                                   160344-18-3P
                                                  160344-19-4P
     160344-20-7P
                    160344-21-8P
                                   160344-22-9P
                                                  160344-23-0P
     160344-24-1P
                    160344-25-2P
                                   160344-26-3P
                                                  160344-27-4P
     160344-28-5P
                    160344-29-6P
                                   160344-30-9P
                                                  160344-31-0P
     160344-32-1P
                    160344-33-2P
                                   160344-34-3P
                                                  160344-35-4P
     160344-36-5P
                    160344-37-6P
                                   160344-38-7P
                                                  160344-39-8P
     160344-40-1P
                    160344-41-2P
                                   160344-42-3P
                                                  160344-43-4P
                                                  160344-47-8P
     160344-44-5P
                    160344-45-6P
                                   160344-46-7P
                                                  160344-51-4P
     160344-48-9P
                    160344-49-0P
                                   160344-50-3P
                                                  160344-55-8P
     160344-52-5P
                    160344-53-6P
                                   160344-54-7P
                                                  160344-59-2P
     160344-56-9P
                    160344-57-0P
                                   160344-58-1P
     160344-60-5P
                    160344-61-6P
                                   160344-62-7P
                                                  160344-63-8P
                                                  160344-67-2P
     160344-64-9P
                    160344-65-0P
                                   160344-66-1P
                                                  160401-07-0P
     160344-68-3P
                    160344-69-4P
                                   160401-06-9P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of, as natriuretic)
IT
     107-96-0, 3-Mercaptopropionic acid
                                         1197-55-3, p-Aminophenylacetic
            2462-32-0, Phenylalanine benzyl ester hydrochloride
     15761-39-4, BOC-Pro-OH
                              29022-11-5, FMOC-Gly-OH
                         71989-23-6, FMOC-Ile-OH
                                                   71989-31-6,
     FMOC-Asp (OtBu) -OH
                                 119831-72-0
                                               124815-67-4
     FMOC-Pro-OH
                   103310-88-9
     RL: RCT (Reactant)
        (reaction of, in prepn. of peptide deriv. natriuretic)
    ANSWER 23 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
AN
     122:81615 MARPAT
     Preparation of boronic acids and esters as inhibitors of thrombin
ΤI
```

```
IN
     Amparo, Eugene Cruz; Miller, William Henry; Pacofsky, Gregory James;
     Wityak, John
PA
     Du Pont Merck Pharmaceutical Co., USA
     PCT Int. Appl., 74 pp.
so
     CODEN: PIXXD2
PΙ
     WO 9421650 Al 940929
DS
     W: AU, CA, JP, NZ
     RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
     WO 94-US2965 940323
AΙ
PRAI US 93-36377 930324
DT
     Patent
LΑ
     English
AB
     Novel boronic acid derivs. R1ZCNR2BY1Y2 [Y1, Y2 = OH, F,
     organoamino, C1-8 alkoxy, N, S, O-heteroatom substituted C2-20
     cyclic boron ester, etc.; Z = (CH2)mCONR8, (CH2)mCSNR8,
     (CH2)mSO2NR8, (CH2)mCO2, (CH2)mC(S)O, (CH2)mSO2O, R8 = H, araalkyl,
     C3-7 cycloalkyl, C1-8 alkyl, m = 0-6; R1 = araalkyl, naphthyl or
     biphenyl (substituted with one, two, or three substituents selected
     from halo, cyano, C3-8 cycloalkyl, C2-10 alkenyl), heteroaryl, etc.;
     R2 = (CH2) \text{ nNHC (NH) NH2}, (CH2) \text{ nNHC (NH) NHAc}, (CH2) \text{ nSC (NH) NH2},
     (CH2) nSC(NH2) 2, (CH2) nNH(2-pyridy1); n = 3, 4, which are useful
     inhibitors of trypsin-like enzymes, are disclosed. Thus,
     N1-(4-phenylbenzoyl)boroarginine (+)-pinanediol bisulfite was prepd.
     in 4 steps starting from (+)-pinanediol 4-bromo-1(R)-aminobutane-1-
     boronate. Biol. activity of some of the compds. prepd. is given.
IC
     ICM C07F005-02
     ICS A61K031-69
CC
     29-4 (Organometallic and Organometalloidal Compounds)
     Section cross-reference(s): 1
ST
     boronate ester prepn inhibitor thrombin
     160195-69-7P
                   160195-70-0P
                                   160195-71-1P
                                                 160195-72-2P
IT
                                   160195-75-5P
     160195-73-3P
                   160195-74-4P
                                                 160195-76-6P
     160195-77-7P
                   160195-78-8P
                                   160195-79-9P 160195-80-2P
     160195-81-3P
                  160195-82-4P
                                   160195-83-5P
                                                  160195-84-6P
     160195-85-7P
                   160195-86-8P
                                   160195-87-9P
                                                  160195-88-0P
     160195-89-1P
                   160195-90-4P
                                   160195-91-5P
                                                  160195-92-6P
     160195-93-7P
                   160195-94-8P
                                   160195-95-9P
                                                  160195-96-0P
     160195-97-1P
                   160195-98-2P
                                   160195-99-3P
                                                  160196-00-9P
     160196-01-0P
                    160196-02-1P
                                   160196-03-2P
                                                  160196-04-3P
     160196-05-4P
                    160196-06-5P
                                   160196-07-6P
                                                  160196-08-7P
     160196-09-8P
                    160196-10-1P
                                   160196-11-2P
                                                  160196-12-3P
     160332-87-6P
     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (prepn. of boronic acids and esters as inhibitors of thrombin)
ΙT
     9002-04-4, Thrombin
     RL: BPR (Biological process); BIOL (Biological study); PROC
     (Process)
        (prepn. of boronic acids and esters as inhibitors of thrombin)
IT
     62-56-6, Thiourea, reactions
                                   14002-51-8, 4-Phenylbenzoyl chloride
     160332-85-4
     RL: RCT (Reactant)
        (prepn. of boronic acids and esters as inhibitors of thrombin)
IT
     160196-13-4P
                    160196-14-5P
                                   160196-15-6P
                                                  160332-86-5P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of boronic acids and esters as inhibitors of thrombin)
    ANSWER 24 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
AN
     122:72014 MARPAT
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Ι

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TI Use of inhibitors of HIV proteases for the treatment of tumorous diseases
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IN Roesel, Johannes; Regenass, Urs; Lang, Marc; Bold, Guido; Cumin, Frederic

PA Ciba-Geigy A.-G., Switz.

SO Eur. Pat. Appl., 27 pp.

CODEN: EPXXDW

PI EP 626178 A1 941130

DS R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE

AI EP 94-810274 940509

PRAI CH 93-1492 930517

DT Patent

LA German

GΙ

AB Inhibitors of HIV (human immunodeficiency virus) aspartate proteinases, and their salts and prodrugs, inhibit the growth of tumors, esp. of those which do not respond directly to inhibition of HIV proteinase. Thus, growth of s.c. transplanted human mammary carcinoma MCF-7 in mice was inhibited by administration twice a day of peptide I (prepn. given) (50 mg/kg orally as aq. soln. contg. 5% DMSO and 20% hydroxypropyl-.beta.-cyclodextrin).

IC ICM A61K037-64

CC 1-6 (Pharmacology)

Section cross-reference(s): 34, 63

ST HIV protease inhibitor antitumor; peptide protease inhibitor antitumor

IT Neoplasm inhibitors

(inhibitors of HIV proteases for treatment of tumorous diseases)

IT Virus, animal

TΨ

(human immunodeficiency, inhibitors of HIV proteases for treatment of tumorous diseases)

IT 150608-41-6P 150608-56-3P 150736-68-8P

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(inhibitors of HIV proteases for treatment of tumorous diseases)

IT 78169-47-8, Aspartic proteinase

RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitors of HIV proteases for treatment of tumorous diseases) 98818-42-9P

RL: BYP (Byproduct); PREP (Preparation)

(inhibitors of HIV proteases for treatment of tumorous diseases)

IT 100-39-0, Benzyl bromide 824-94-2, 4-Methoxybenzyl chloride 2344-80-1, (Chloromethyl)trimethylsilane 18162-48-6 24424-99-5, Boc-anhydride 72155-45-4 113195-57-6, 4-Benzyloxybenzyl iodide 133333-27-4

RL: RCT (Reactant)

(inhibitors of HIV proteases for treatment of tumorous diseases) 70887-29-5P 95977-60-9P 98760-08-8P 98818-41-8P 98818-45-2P IT 110600-56-1P 107202-43-7P 110600-55-0P 98818-51-0P 135103-86-5P 126410-29-5P 126410-30-8P 112227-09-5P 138498-91-6P 141834-13-1P 150609-28-2P 138498-90-5P 160431-24-3P 150609-29-3P 151177-18-3P 151920-09-1P 160431-27-6P 160431-28-7P 160431-25-4P 160431-26-5P 160431-29-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (inhibitors of HIV proteases for treatment of tumorous diseases)

- L17 ANSWER 25 OF 34 MARPAT COPYRIGHT 1997 ACS
- AN 121:255787 MARPAT
- TI Preparation of thiazoles and oxazoles as insecticides
- IN Yamada, Yasuo; Kishimoto, Takashi; Matsuda, Michihiko; Hatano, Renpei; Iwasa, Takao
- PA Nippon Soda Co., Ltd., Japan
- SO Jpn. Kokai Tokkyo Koho, 38 pp.
  - CODEN: JKXXAF
- PI JP 06145169 A2 940524 Heisei
- AI JP 93-123547 930427
- PRAI JP 92-272452 920917
- DT Patent
- LA Japanese
- OS CASREACT 121:255787
- GΙ

AB The title compds. [I; R1 = (un)substituted heterocyclyl; R2 = (un) substituted Ph, naphthyl, aralkyl, or heterocyclyl], useful as insecticides, are prepd. by (1) cyclization of R1CONHCHR2CH2Y (R1, R2 = same as above; Y = leaving group) or (2) cyclization of R1CONHCHR2CH2Y in the presence of a sulfurization agent. g 2-(2-chloropheny1)-2-aminoethanol and 1.0 g Et3N were dissolved in THF followed by adding 0.8 g isonicotinoyl chloride hydrochloride under ice-cooling and the resulting mixt. was stirred at room temp. for 12 h, filtered to remove pptd. crystals, and concd. in vacuo to give a residue contg. intermediate (II). This was dissolved in CHCl3 followed by adding 1.2 g SOCl2 and refluxing the resulting mixt. for 2 h and the reaction mixt. was concd. in vacuo, taken up with EtOAc, washed with satd. aq. NaHCO3, dried over anhyd. MgSO4, evapd. in vacuo to give a residue which was dissolved in MeOH followed by adding 2 mL 15% aq. NaOH and heating the resulting mixt. at 70.degree. for 30 min to give, after workup and silica gel chromatog., 0.8 g phenylpyridyloxazole deriv. (III). III sprayed on Searcher: Shears 308-4994

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cucumber seedlings at 125 ppm killed 100% adult Aphis gossypii vs. 6
     and 100% for pyrimicarb and thiometon, resp.
IC
     ICM C07D413-04
         C07D413-04; A01N043-76; A01N043-78; C07D413-14; C07D417-04;
     TCS
          C07D417-14
     28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
CC
     Section cross-reference(s): 5
     thiazole oxazole prepn insecticide; phenylpyridyloxazole prepn
ST
     insecticide; pyridyloxazole prepn insecticide
IT
     Insecticides
        (prepn. of thiazoles and oxazoles as insecticides)
IT
     158499-50-4P
                    158499-51-5P
                                   158499-52-6P
     158499-54-8P
                    158499-55-9P
                                   158499-56-0P
                                                  158499-57-1P
                    158499-59-3P
                                   158499-60-6P
                                                  158499-61-7P
     158499-58-2P
     158499-62-8P
                                                  158499-65-1P
                    158499-63-9P
                                   158499-64-0P
     158499-66-2P
                                   158499-68-4P
                                                  158499-69-5P
                    158499-67-3P
     158499-70-8P
     RL: AGR (Agricultural use); BAC (Biological activity or effector,
     except adverse); SPN (Synthetic preparation); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (prepn. of thiazoles and oxazoles as insecticides)
IT
     39178-35-3, Isonicotinoyl chloride hydrochloride
                                                         127428-62-0
     RL: RCT (Reactant)
        (prepn. of thiazoles and oxazoles as insecticides)
TΨ
     158499-71-9P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of thiazoles and oxazoles as insecticides)
    ANSWER 26 OF 34 MARPAT COPYRIGHT 1997 ACS
T.17
     120:290102 MARPAT
AN
     Peptide derivatives for thrombin receptor antagonists
ΤI
     Scarborough, Robert M.
IN
     Cor Therapeutics, Inc., USA
PA
     PCT Int. Appl., 35 pp.
so
     CODEN: PIXXD2
PΙ
     WO 9403479 A1 940217
         AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP,
DS
         KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD,
         SE, SK, UA, US, VN.
     RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR,
         IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
     WO 93-US6428 930708
AΤ
PRAI US 92-922340 920730
     US 93-80788 930628
DT
     Patent
LΑ
     English
     Peptide derivs. (Markush included) serving as thrombin receptor
AΒ
     antagonists are disclosed, which bear specificity for the cellular
     thrombin receptor without interfering with the catalytic activities
     of thrombin. Synthesis of (N,N-di-n-pentyl-Phe)-Cha-Cha-Arg-Lys-NH2
     (Cha is cyclohexylalanine) and of other peptides of the invention is
     described. IC50 values for 60 compds. are included.
IC
     ICM C07K005-00
         C07K007-00; A61K037-02
     ICS
CC
     1-8 (Pharmacology)
     peptide deriv thrombin receptor antagonist
ST
IT
     Peptides, biological studies
     RL: BIOL (Biological study)
        (derivs., for thrombin receptor antagonists)
IT
     Receptors
                               Searcher: Shears 308-4994
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RL: BIOL (Biological study)
        (thrombin, antagonists of, peptide derivs. for)
IT
     9002-04-4, Thrombin
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (receptors, antagonists of, peptide derivs. for)
                                                             155115-46-1
IT
                  155115-43-8
                                155115-44-9
                                               155115-45-0
                                                             155115-51-8
                                               155115-50-7
     155115-47-2
                   155115-48-3
                                 155115-49-4
                                                             155115-56-3
                                               155115-55-2
     155115-52-9
                   155115-53-0
                                 155115-54-1
                                                             155115-61-0
                                              155115-60-9
     155115-57-4
                   155115-58-5
                                 155115-59-6
                                               155115-65-4
                                                             155115-66-5
     155115-62-1
                   155115-63-2
                                 155115-64-3
     155115-67-6
                   155115-68-7
                                 155115-69-8
                                               155115-70-1
                                                             155115-71-2
     155115-72-3
                   155115-73-4
                                 155115-74-5
                                               155115-75-6
                                                             155115-76-7
                                               155115-80-3
                                                             155115-81-4
     155115-77-8
                   155115-78-9
                                 155115-79-0
                                                             155115-86-9
     155115-82-5
                   155115-83-6
                                 155115-84-7
                                               155115-85-8
     155115-87-0
                   155147-19-6
                                 155147-20-9
                                               155147-21-0
                                                             155147-22-1
     155147-23-2
                   155147-24-3
                                 155147-25-4
                                               155147-26-5
                                                             155147-27-6
                   155147-29-8
                                 155147-30-1
                                               155147-31-2
                                                             155147-32-3
     155147-28-7
    RL: BAC (Biological activity or effector, except adverse); BIOL
     (Biological study)
        (thrombin receptor antagonist activity of)
    ANSWER 27 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
AN
     120:245787 MARPAT
     Preparation of dithiolanylglycine containing HIV protease inhibitors
ΤI
     of the hydroxyethylene isostere type
     Haebich, Dieter; Bender, Wolfgang; Hansen, Jutta; Paessens, Arnold
IN
     Bayer A.-G., Germany
PΑ
     Eur. Pat. Appl., 27 pp.
SO
     CODEN: EPXXDW
PΙ
     EP 569811 A1 931118
       AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
DS
     EP 93-107140 930503
ΑI
PRAI DE 92-4215874 920514
DT
     Patent
LА
     German
```

GΙ

AB Title compds. (I; W = H, protecting group, acyl; A, B = bond, NHCMe2CO, Q1, etc.; x = 1, 2; R1 = alkyl substituted by Ph or cyclohexyl; R2 = H, alkyl, protecting group; R3 = alkyl, alkenyl, PhCH2), were prepd. Thus, (2R)-N-(tert-butoxycarbonyl)-2-amino-2-[2-(1,3-dithiolan-2-yl)]acetic acid in CH2Cl2 was stirred with 1-hydroxybenzotriazole/DCC at 0.degree.; 1-[(2R,S,4S,5S)-[5-amino-6cyclohexyl-4-hydroxy-2-(1-methyl)ethylhexanoyl]]-(S)isoleucinylpyridylmethylamide dihydrochloride and N-methylmorpholine in CH2Cl2 were added and the mixt. was stirred 2 h at room temp. to give 77% title compd. II. II inhibited HIV-1 protease with IC50 = 1.4 .times.10-9M. I were shown to protect HIV-1 infected cells against virally-induced destruction. IC ICM C07K005-02 ICS A61K037-64; A61K031-33; C07D409-12; C07D409-14

CC 34-3 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 1

ST peptide dithiolanylglycyl prepn HIV protease inhibitor; virucide dithiolanylglycyl peptide

IT Virucides and Virustats

(dithiolanylglycyl-contg. peptides, for retroviruses)

IT Peptides, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of dithiolanylglycyl-contg., as HIV protease inhibitors)

IT 144114-21-6, Retropepsin

RL: RCT (Reactant)

(HIV, inhibitors, dithiolanylglycyl-contg. peptides as)

IT 136520-80-4 137331-84-1 143167-43-5 153625-72-0 153625-73-1 153668-36-1 153668-37-2 153668-43-0

RL: RCT (Reactant)

(coupling reaction of, in prepn. of, as HIV protease inhibitor)

IT 153625-68-4P 153625-69-5P 153625-70-8P 153625-71-9P 153625-72-0P 153625-73-1P 153625-74-2P 153625-75-3P 153625-76-4P 153625-77-5P 153625-78-6P 153625-79-7P 153625-80-0P 153625-81-1P 153668-32-7P 153668-33-8P 153668-37-2P 153668-34-9P 153668-35-0P 153668-36-1P

153668-38-3P 153668-39-4P 153668-40-7P 153668-41-8P 153668-42-9P 153668-44-1P

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation) (prepn. of, as HIV protease inhibitor)

L17 ANSWER 28 OF 34 MARPAT COPYRIGHT 1997 ACS

AN 119:250508 MARPAT

TI Preparation of 5-amino-4-hydroxyhexanoic acid derivative containing peptides as HIV protease inhibitors

IN Lang, Marc; Bold, Guido; Faessler, Alexander; Schneider, Peter; Van Hoogesvest, Peter

PA Ciba-Geigy A.-G., Switz.

SO Eur. Pat. Appl., 79 pp.

CODEN: EPXXDW

PI EP 532466 A2 930317

DS R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE

AI EP 92-810678 920903

PRAI CH 91-2689 910912

CH 92-980 920327

CH 92-2007 920625

DT Patent

LA German

GΙ

$$\begin{array}{c|c}
 & \text{OH} & \text{R}^3 \\
 & \text{R}^1 \text{X} & \text{N} & \text{R}^5
\end{array}$$

II

I

AB Title compds. [I; R1 = H, alkoxycarbonyl, heterocyclylcarbonyl, heterocyclyloxycarbonyl, (substituted) benzyloxycarbonyl, etc.; X = bond, .alpha.-amino acid residue; R2, R3 = (substituted) Ph, cyclohexyl; A1 = bond, .alpha.-amino acid residue; A2 = .alpha.-amino acid residue; A1A2 = dipeptide residue whose central amide bond is reduced; NR4R5 = (thio)morpholino], were prepd. as HIV protease inhibitors. Thus, title compd. II was prepd. in many steps starting from BOC-phenylalaninal using soln. phase methods. I inhibited HIV-1 multiplication in MT-2 cells with ED90's of Searcher: Shears 308-4994

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10-5-10-8M. Generic I oral formulations are given.
IC
     ICM C07K005-04
          C07D295-16; A61K037-64
     34-3 (Amino Acids, Peptides, and Proteins)
CC
     Section cross-reference(s): 1
     aminohydroxyhexanoate peptide HIV protease inhibitor
ST
     Virucides and Virustats
IT
        (peptides, for HIV)
     Peptides, preparation
IT
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of 5-amino-4-hydroxyhexanoate-contg., as HIV protease
        inhibitors)
IT
     Virus, animal
        (human immunodeficiency 1, infection by, treatment of, peptides
        for)
TΨ
     144114-21-6, Retropepsin
     RL: RCT (Reactant)
        (HIV; inhibitors, peptide analogs as)
IT
     150736-69-9P
     RL: FORM (Formation, nonpreparative); SPN (Synthetic preparation);
     PREP (Preparation)
        (formation of, in prepn. of peptide analog HIV protease
        inhibitor)
                                    150608-22-3P
                                                   150608-23-4P
IT
     150608-20-1P
                    150608-21-2P
                                    150608-26-7P
                                                   150608-27-8P
     150608-24-5P
                    150608-25-6P
                    150608-29-0P
                                    150608-30-3P
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     150608-28-9P
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     150608-36-9P
                    150608-37-0P
                                    150608-38-1P
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     150608-44-9P
                    150608-45-0P
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                    150608-93-8P
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                    150609-09-9P
                                    150609-10-2P
                                                   150609-11-3P
     150609-08-8P
                    150609-13-5P
                                    150609-14-6P
                                                   150609-15-7P
     150609-12-4P
                    150609-17-9P
                                    150609-18-0P
                                                   150609-19-1P
     150609-16-8P
     150736-68-8P
     RL: BAC (Biological activity or effector, except adverse); SPN
     (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
        (prepn. of, as HIV protease inhibitor)
ΙT
     1828-66-6P, 4-Morpholinesulfonyl chloride
                                                   2835-21-4P
                                                   16250-37-6P
     15159-40-7P, 4-Morpholinecarbonyl chloride
     17543-58-7P
                                                56414-76-7P
                                                               56414-96-1P
                   31253-08-4P
                                  41153-30-4P
                                  98760-08-8P
                                                98818-41-8P
                                                               98818-42-9P
     78879-20-6P
                   82611-59-4P
     98818-45-2P
                   98818-51-0P
                                  107202-43-7P
                                                 110600-55-0P
     110600-56-1P
                    120125-44-2P
                                    126410-29-5P
                                                   126410-30-8P
     133333-27-4P
                    135103-86-5P
                                    135544-90-0P
                                                   141834-13-1P
                    149267-74-3P
                                    149296-81-1P
                                                   150609-20-4P
     144164-04-5P
                                Searcher: Shears 308-4994
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150609-24-8P
                                   150609-23-7P
     150609-21-5P
                    150609-22-6P
                                                   150609-28-2P
                                   150609-27-1P
     150609-25-9P
                    150609-26-0P
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                    150609-30-6P
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     150609-29-3P
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                    150609-34-0P
     150609-33-9P
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     150609-37-3P
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                                                   150609-44-2P
     150609-41-9P
                    150609-42-0P
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                    150609-66-8P
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                    150609-70-4P
                                   150609-75-9P
                                                   150609-76-0P
     150609-73-7P
                    150609-74-8P
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     150609-81-7P
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     150609-85-1P
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                                   150609-87-3P
                                                   150609-88-4P
                                                   150609-92-0P
     150609-89-5P
                    150609-90-8P
                                   150609-91-9P
     150609-93-1P
                    150609-94-2P
                                   150821-06-0P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of, as intermediate for HIV protease inhibitor)
IT
     59-67-6, 3-Pyridinecarboxylic acid, reactions
                                                    72-18-4, L-Valine,
                                                            107-11-9,
     reactions
                 75-44-5, Carbonic dichloride
                                                105-53-3
                        109-94-4
                                   123-90-0, Thiomorpholine
                                                              459-46-1
     2-Propen-1-amine
     535-11-5
                1132-68-9
                            1138-80-3
                                        1149-26-4
                                                    1161-13-3
                                                                 2344-80-1
                                                      19542-51-9
     2462-34-2
                 3160-59-6
                             7635-29-2
                                         17201-43-3
     19542-54-2
                  21760-98-5
                               26537-68-8, 3-Benzofurancarboxylic acid
     72155-45-4
                  74163-81-8
                               144163-45-1
     RL: RCT (Reactant)
        (reaction of, in prepn. of peptide analog HIV protease inhibitor)
    ANSWER 29 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
     119:249788 MARPAT
ΑN
ΤI
     Synthesis and optical resolution of the taxol side chain and related
     compounds
     Peterson, John R.; Zjawiony, Jordan K.; Rogers, Robin D.
IN
PA
     University of Mississippi, USA
so
     PCT Int. Appl., 108 pp.
     CODEN: PIXXD2
PΙ
     WO 9310076 A1 930527
         AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP,
DS
         KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE
     RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR,
         IE, IT, LU, MC, ML, MR, NL, SE, SN, TD, TG
ΑI
     WO 92-US9911 921119
PRAI US 91-797136 911122
     Patent
DT
ĹΑ
     English
     CASREACT 119:249788
os
GΙ
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Racemic taxane side chain I [R1 = C1-8 linear or branched alkyl, AB -alkenyl, or -alkynyl, -hydroxyalkyl, C3-8 cycloalkyl or -alkenyl, C5-20 aryl, indolyl, thiophenyl, furanyl, quinolyl, C1-6 aminoalkyl, 2-, 3- or 4-pyridinyl, or UC6H4V (U and V independently = H, halo, OH, SH, NO2, N3, NH2, C2-8-alkyl or -aryl-N-amido, C2-8 alkyl- or arylcarboxylate, etc.); R2 = C1-8 linear or branched alkyl, C3-8 cycloalkyl, C7-12 alkylphenyl; R4 = R1 or OR5; R5 = C1-8 linear or branched alkyl, -alkenyl, or -alkynyl, C3-8-cycloalkyl or -cycloalkenyl, C5-20 aryl] is synthesized and is resolved by crystn., entrainment, or manual sorting due to its conglomerate behavior. The semisynthesis of taxanes (e.g., taxol) via coupling of the substantially optically pure taxane side chain to a taxane ring nucleus II (A or B, P or Q, G or M, and E or F independently = H, lower alkanoyloxy, alkenoyoxy, aroyloxy; AB, PQ, IJ, GM, or EF = O; L and D independently or I, J, or K = H, OH, lower alkanoyloxy, alkenoyloxy, aroyloxy; GM = CH2, oxirane; MF = oxetane) is also described. Thus, the Darzens reaction of PhCHO with ClCH2CO2Me gave 73% (.+-.)-Me trans-3-phenyloxiranecarboxylate (trans-III) which was syn-ring opened by HCl in C6H6 to give 65% (.+-.)-Me threo-3-chloro-2-hydroxy-3-phenylpropionate which in aq. Na2CO3 gave 50% cis-III. Cis-III in MeOH-MeO2CH contg. NaN3, under N, gave 93% (.+-.)-Me threo-3-azido-2-hydroxy-3-phenylpropionate which was etherated with BzCl in CH2Cl2 contg. Et3N and DMAP gave 98% (.+-.)-Me threo-3-azido-2-benzoyloxy-3-phenylpropionate which is hydrogenated in MeOH over Pd/C to give the racemic taxol side chain (.+-.)-N-benzoyl-3-phenylisoserine Me ester [(.+-.)-IV]; the conglomerate nature of this racemate was established crystallog. from the acentric monoclinic P21 space group. (.+-.)-IV was resolved by seed crystal-induced crystn. from EtOH to give (2R, 3S)-N-benzoyl-3-phenylisoserine Me ester which was converted to the hydroxy protected O-ethoxyethyl-3-phenylisoserine ester deriv. which was sapond. by aq. methanolic K2CO3 and coupled to 7-triethylsilylbaccatin III followed by HCl deprotection to give taxol.

IC ICM C07C231-20

ICS C07C233-87; C07D305-14; C07C069-675

CC 26-6 (Biomolecules and Their Synthetic Analogs) Section cross-reference(s): 22, 24, 30, 34, 75

ST optical resoln taxol side chain; crystallog conglomerate taxol side chain resoln

IT Resolution

(of taxol side chain conglomerate)

IT Crystal structure

(of taxol side chain conglomerate and its resolved enantiomorph)

IT Configuration

(abs., of resolved taxol side chain enantiomorph, crystallog. detd.)

IT 96-34-4, Methyl chloroacetate 100-52-7, Benzaldehyde, reactions Searcher: Shears 308-4994

```
RL: RCT (Reactant)
        (Darzens reaction of, in conversion to Me
        phenyloxiranecarboxylate in taxol semisynthesis)
     115437-21-3, 7-Triethylsilylbaccatin III
IT
     RL: RCT (Reactant)
        (coupling of, with taxol side chain enantiomorph, in taxol
        semisynthesis)
     4407-36-7, trans-Cinnamyl alcohol
                                          4510-34-3
IT
     RL: RCT (Reactant)
        (epoxidn. of)
IT
     130607-99-7P, (.+-.)-Methyl cis-3-phenyloxiranecarboxylate
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and conversion of, to Me azido(hydroxy)phenylpropionate
        in taxol semisynthesis)
     98819-67-1P, (.+-.)-trans-3-Phenyloxiranemethanol
IT
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and conversion of, to Me phenyloxiranecarboxylate)
IT
     136778-67-1P
                    136778-69-3P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and coupling of, with triethylsilylbaccatin III in taxol
        semisynthesis)
IT
     133161-34-9P .
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and deprotection of, taxol by)
IT
     150823-26-0P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and hydrogenation/ rearrangement of, in taxol
        semisynthesis)
IT
     32981-85-4P, (2R,3S)-N-Benzoyl-3-phenylisoserine methyl ester
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and hydroxyl group protection of, in taxol semisynthesis)
     105663-44-3P, (.+-.)-cis-3-Phenyloxiranemethanol
IT
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and oxidn./esterification of, by sodium periodate and
        ruthenium trichloride/diazomethane)
TΤ
     145438-00-2P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and ring closure of, in taxol semisynthesis)
     136778-73-9P
                    136779-75-4P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and sapon. of, in taxol semisynthesis)
     41603-34-3P, (.+-.)-Methyl trans-3-phenyloxiranecarboxylate
IT
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and syn-ring opening of, in taxol semisynthesis)
IT
     129939-46-4P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and O-benzoylation of, in taxol semisynthesis)
IT
     133161-33-8P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of)
IT
     132074-01-2P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn., crystallog. and resoln. of conglomerate)
     109-92-2, Ethyl vinyl ether
IT
     RL: RCT (Reactant)
        (reaction of, with N-benzoylphenylisoserine Me ester to give
        O-ethoxyethyl deriv. in taxol semisynthesis)
ΙT
     33069-62-4P, Taxol
     RL: PREP (Preparation)
        (resoln. of side chain in semisynthesis of)
                                Searcher: Shears 308-4994
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IT
     7782-79-8, Hydrazoic acid
     RL: RCT (Reactant)
        (ring cleavage of Me phenyloxiranecarboxylate by, in taxol
        semisynthesis)
    ANSWER 30 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
AN
     119:226427 MARPAT
     Peptide aldehydes as antithrombotic agents
ΤI
     Balasubramanian, Neelakantan; St. Laurent, Denis R.
IN
PA
     Bristol-Myers Squibb Co., USA
so
     Eur. Pat. Appl., 55 pp.
     CODEN: EPXXDW
PΙ
    EP 526877 A2 930210
       AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
DS
ΑI
    EP 92-113284 920804
PRAI US 91-741023 910806
DT
     Patent
LA
     English
     CASREACT 119:226427
os
GΙ
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *
     Arginine aldehydes I [R1 and R2 = H or COR [R = H, lower alkyl,
AR
     benzyl, CH(OAc)Me]; R3 and R4 = H, lower alkyl, benzyl,
     (un) substituted Ph, (un) substituted C3-7 cycloalkyl; R3R4 =
     (un) substituted C3-7 cycloalkyl; R3R4 = Ph or arom. ring; R5 = H or
     lower alkyl; R3R5 or R4R5 may be linked together to form a
     heterocyclic ring with 3 to 7 carbon atoms; R7 = CHO, CH2OH, CO2H; X
     = CO, (CH2)m, SO2; Y = (CH2)m, CH2CHNHR8, CHNHR8 [R8 = lower alkyl,
     benzyl, R1 and R2 as described above, SOR9 where R9 = lower alkyl,
     C3-7 cycloalkyl, (un) substituted Ph or (un) substituted naphthyl]; R6
     = (CH2)m R10 (R10 = Ph, pyridyl, thiophenyl, naphthyl, quinolinyl or
     C3-7 cycloalkyl); n = -1, -2, 0, 1, 2, 3, 4; m = 0, 1, 2 were
     prepd. as antithrombotic agents and trypsin inhibitors.
     Boc-L-Arg-OH.HCl (Boc = Me3CO2C) was treated with benzyl
     chloroformate in the presence of Et3N in THF to give 21.6% lactam II
     (Z = PhCH2O2C, R11 = Boc), which was Boc-deblocked by HCl in CH2Cl2
     and EtOAc to give 97% II.2HCl (R11 = H). The latter was coupled
     with N-[3-(3-pyridyl)propanoyl]-L-proline by diphenylphosphoryl
     azide in the presence of Et3N in DMF to give 33% dipeptide lactam
     III, which was reduced by LiAlH4 in THF to give 57% arginine
     aldehyde IV (R12 = Z), which was Z-deblocked by hydrogenolysis over
     Pd/C to give IV.2HCl (R12 = H). Antithrombotic and
```

Section cross-reference(s): 1
ST arginine aldehyde peptide prepn antithrombotic; trypsin inhibitor arginine aldehyde peptide
IT Anticoagulants and Antithrombotics

trypsin-inhibiting activities are given for many tile compds.

C07D211-76; C07K005-06; C07K005-08; C07K005-02; A61K037-64; C07D207-16; C07D409-06; C07D417-06; C07D233-88; C07D413-12

(arginine aldehyde-contg. peptides)

IC

CC

ICS

ICM C07D401-06

IT Peptides, preparation RL: SPN (Synthetic preparation); PREP (Preparation) Searcher: Shears 308-4994

34-3 (Amino Acids, Peptides, and Proteins)

```
(arginine aldehyde-contg., prepn. of, as antithrombotic agents)
IT
     701-97-3, 3-Cyclohexylpropionic acid
     RL: RCT (Reactant)
        (acylation by, of arginine lactam-contg. dipeptide)
IT
     3724-19-4, 3-Pyridinepropanoic acid
     RL: RCT (Reactant)
        (acylation by, of proline tert-Bu ester)
     2812-46-6, L-Proline tert-butyl ester
IT
     RL: RCT (Reactant)
        (acylation of, with pyridylpropionic acid)
                   150729-30-9
                                 150729-31-0
                                                150729-32-1
                                                              150729-33-2
TT
     146787-55-5
     150729-34-3
                   150729-35-4
                                  150729-36-5
                                                150729-37-6
                                                              150729-38-7
                                                              150729-43-4
     150729-39-8
                   150729-40-1
                                 150729-41-2
                                                150729-42-3
     150729-45-6
                   150729-46-7
                                 150729-50-3
                                                150729-51-4
                                                              150729-52-5
                   150729-57-0
                                  150824-20-7
                                                150824-22-9
                                                              150824-23-0
     150729-56-9
     150824-25-2
                   150849-61-9
     RL: RCT (Reactant)
        (antithrombotic agent)
IT
     501-53-1, Benzyl chloroformate
     RL: RCT (Reactant)
        (benzyloxycarbonylation by, of arginine deriv.)
IT
     35897-34-8
     RL: RCT (Reactant)
        (benzyloxycarbonylation of)
IT
     605-65-2
     RL: RCT (Reactant)
        (dansylation by, of dipeptide tert-Bu ester)
IT
     57224-94-9
     RL: RCT (Reactant)
        (hydrogenolysis of)
ΙT
     9002-07-7, Trypsin
     RL: PROC (Process)
        (inhibition of, by arginine aldehyde-contg. peptides)
IT
     15761-39-4
     RL: RCT (Reactant)
        (peptide coupling of, with arginine lactam deriv.)
IT
     5928-51-8P, 2-Thiophenepropanoic acid
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and acylation by, of proline deriv.)
IT
     150728-95-3P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and coupling of, with arginine lactam deriv.)
IT
     60189-22-2P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and dansylation of)
                                    150728-84-0P
                                                   150728-89-5P
IT
     150728-72-6P
                    150728-77-1P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and de-tert-butylation of)
                                                  150728-61-3P
IT
     24277-16-5P
                   150728-56-6P
                                  150728-58-8P
     150728-63-5P
                    150728-66-8P
                                   150728-68-0P
                                                   150728-71-5P
     150728-80-6P
                    150728-83-9P
                                    150728-87-3P
                                                   150728-92-0P
     150728-97-5P
                    150729-00-3P
                                    150729-03-6P
                                                   150729-06-9P
                                    150729-18-3P
                                                   150729-19-4P
     150729-10-5P
                    150729-14-9P
                                    150743-62-7P
                                                   150743-63-8P
     150729-23-0P
                    150729-24-1P
     152417-02-2P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and deblocking of)
IT
     146787-72-6P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and hydride redn. of)
                                Searcher: Shears 308-4994
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IT
     1124-65-8P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and hydrogenation of)
     150728-55-5P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and hydrogenolysis of)
TT
     150728-94-2P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and hydrolysis of)
IT
     150728-51-1P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and partial deblocking of)
TΤ
     51219-20-6P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and partial deblocking-cyclization of)
                    150728-73-7P
                                   150728-78-2P
                                                   150728-85-1P
IT
     150728-53-3P
     150728-90-8P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and peptide coupling of, with arginine lactam deriv.)
IT
     144206-50-8P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and peptide coupling reactions of)
IT
     150728-76-0P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and reaction of, with isothiourea deriv.)
IT
     146787-68-0P
                    146787-70-4P
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                    150824-19-4P
    RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and redn. of)
IT
     150728-52-2P
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        (prepn. of)
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     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of, as antithrombotic agent)
IT
     59867-91-3DP, peptides contg.
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of, as antithrombotic agents)
IT
     37980-29-3
     RL: RCT (Reactant)
        (reaction of, with Et bromoacetate)
IT
     105-36-2, Ethyl bromoacetate
     RL: RCT (Reactant)
        (reaction of, with aminodiphenylimidazole)
IT
     25508-20-7
                               Searcher: Shears 308-4994
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RL: RCT (Reactant)
        (reaction of, with dipeptide tert-Bu ester)
    ANSWER 31 OF 34 MARPAT COPYRIGHT 1997 ACS
L17
ΑN
     119:139787 MARPAT
     Pharmacologically active hydrazine derivatives, useful as antiviral
ΤI
     peptide analogs, and process for their preparation
     Faessler, Alexander; Bold, Guido; Lang, Marc; Schneider, Peter
IN
     Ciba-Geigy A.-G., Switz.
PA
so
     Eur. Pat. Appl., 106 pp.
     CODEN: EPXXDW
ΡI
     EP 521827 A1 930107
        AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, PT, SE
DS
AΙ
     EP 92-810490 920625
PRAI CH 91-1962 910703
     Patent
LA
     German
AB
     Approx. 70 hydrazine-based peptide analogs
     R1R2NCR3R4CR5R6CH2NR7NR8R9 [I; R1, R9 = H, acyl, (un)substituted
     alkyl, alkenyl, or alkynyl, heterocyclyl, (un)substituted sulfamoyl,
     etc.; both R1 and R9 .noteq. H; R2, R8 = H, groups listed for R1; or
     NR1R2, NR8R9 = heterocyclyl; R3, R4 = H, (un)substituted
     (cyclo)alkyl, aryl, heterocyclyl, (un)substituted alkenyl; or R3R4 =
     alkylene, alkylidene, benzo-condensed alkylene; R5 = OH, R6 = H; or
     R5R6 = oxo; R7 = (un)substituted (cyclo)alkyl, aryl, heterocyclyl,
     (un) substituted alkenyl] were prepd. as inhibitors of viral
     aspartate proteases. For example, reaction of (2R)-[1(S)-Boc-amino-
     2'-phenylethyl]oxirane with tert-Bu 3-benzylcarbazate, deprotection
     of the product with HCl in dioxane, double coupling with Boc-Val-OH,
     and deprotection again gave H-Val-(S,S)-
     NHCH(CH2Ph)CH(OH)CH2N(CH2Ph)NH-Val-H as the tri-HCl salt.
     inhibited the activity of HIV-1 and HIV-2 gag-proteases at 10-6 to
     10-9 M in 2 described tests (no specific data).
IC
     ICM C07C243-12
         C07C243-24; C07C243-34; C07C271-12; C07C281-02; C07D295-182;
          C07D213-56; C07D215-48; A61K031-175; A61K031-395; C07D257-04;
          C07D213-36; C07D265-30; C07D307-12; C07D295-185
CC
     34-3 (Amino Acids, Peptides, and Proteins)
     Section cross-reference(s): 1, 7
ST
     hydrazine peptide analog prepn antiviral; HIV aspartate protease
     inhibitor hydrazine
IT
     Virucides and Virustats
        (hydrazine peptide analogs)
IT
     Acquired immune deficiency syndrome
        (treatment of, hydrazine peptide analogs for)
ΙT
     Virus, animal
        (human immunodeficiency 1, infection by, treatment of, hydrazine
        peptide analogs for)
IT
     Virus, animal
        (human immunodeficiency 2, infection by, treatment of, hydrazine
        peptide analogs for)
IT
     144114-21-6, Retropepsin
     RL: RCT (Reactant)
        (gag, of HIV-1 and HIV-2, inhibitors of, hydrazine peptide
        analogs as)
IT
     41153-30-4P
                   82527-47-7P
                                 126410-30-8P
                                               135544-90-0P
                                   143185-09-5P, 4-Thiomorpholinecarbonyl
     142526-85-0P
                   142526-86-1P
                                                             149267-57-2P
                                             149267-56-1P
     chloride
              144164-04-5P
                              149267-55-0P
                    149267-59-4P
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     149267-62-9P
                    149267-63-0P
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     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and reaction of, as intermediate for antiviral peptide
        analogs)
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     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of, as antiviral)
IT
     72-18-4, L-Valine, reactions
                                    75-44-5, Carbonic dichloride
                                           96-81-1, N-Acetylvaline
     93-10-7, Quinoline-2-carboxylic acid
     105-07-7, 4-Cyanobenzaldehyde
                                     123-72-8, n-Butanal
                                                            123-90-0,
                      407-25-0, Trifluoroacetic anhydride
                                                             459-57-4,
     Thiomorpholine
                            501-81-5, 3-Pyridylacetic acid
     p-Fluorobenzaldehyde
                                                              543-27-1,
     Isobutyl chloroformate
                              725-67-7, N-Phenylacetyl-L-valine
                                                               1685-33-2,
     870-46-2, tert-Butyl carbazate
                                     1132-68-9
                                                  1149-26-4
                  1738-76-7, Glycine benzyl ester 4-toluenesulfonate
     Z-D-Val-OH
     2038-03-1, N-(2-Aminoethyl)morpholine
                                             2043-61-0,
     Cyclohexylcarboxaldehyde 2344-80-1, (Chloromethyl)trimethylsilane
     2462-34-2, Valine benzyl ester hydrochloride
                                                     3077-46-1,
     N-Acetyl-L-isoleucine
                             3160-59-6
                                         3256-57-3
                                                      3731-51-9,
                      5891-45-2, Z-Glutamic acid tert-butyl ester
     2-Picolylamine
     7143-01-3, Methanesulfonic acid anhydride
                                                  13211-31-9, L-Valine
                       13518-40-6, Valine tert-butyl ester hydrochloride
     tert-butyl ester
                 15159-40-7, Morpholinocarbonyl chloride
     13734-41-3
                                                             16652-76-9,
     Valine benzyl ester 4-toluenesulfonate
                                               24424-99-5, Boc anhydride
     53370-84-6, tert-Butyl 3-benzylcarbazate
                                                 57699-53-3, tert-Butyl
     3-isobutylcarbazate
                                        74761-42-5, N-Methoxycarbonyl-L-
                           66605-57-0
                           92614-86-3, 3-(1-Tetrazolyl)propionic acid
              82527-46-6
     valine
                                144163-45-1
                                              149268-15-5
     98760-08-8
                  103495-93-8
                                                             149268-16-6,
                               Searcher: Shears 308-4994
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RL: RCT (Reactant) (reaction of, in prepn. of antiviral peptide analogs) 78169-47-8, Aspartate protease IT RL: RCT (Reactant) (viral, inhibitors of, hydrazine peptide analogs as) ANSWER 32 OF 34 MARPAT COPYRIGHT 1997 ACS L17 119:73121 MARPAT ΑN 4-amino-3-hydroxycarboxylic acid derivatives TI Billich, Andreas; Charpiot, Brigitte; Lehr, Philip; Scholz, Dieter IN Sandoz Ltd., Switz.; Sandoz-Patent-G.m.b.H. PA PCT Int. Appl., 49 pp. SO CODEN: PIXXD2 WO 9301166 A1 930121 PΙ W: AU, CA, CS, FI, HU, JP, KR, NO, PL, RO, RU, US DS RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE ΑI WO 92-EP1471 920630 PRAI GB 91-14261 910702 GB 91-23721 911107 GB 92-3884 920224 DT Patent English LΑ

(.+-.)-Isopropylmalonic acid monomethyl ester

GI

Title compds. I [A and B = bond or (un) substituted amino acid AB residue; R1 = H, amino protecting group, R6Y (R6 = H, alkyl, alkenyl, alkynyl, aryl, aralkyl, heteroaryl, etc.; Y = CO, NHCO, NHCS, SO2, OCO, OCS); R2 = amino acid side chain, alkyl, aralkyl, trimethylsilylmethyl, 2-thienylmethyl, etc.; R3 = alkyl, alkenyl, alkynyl, cycloalkyl, aryl, etc.; R4 = OR7 or NHR7 where R7 has the meaning indicated for R6; X = S or NR5 (R5 = H, Me, HCO, Ac) were prepd. antiviral agents, particularly HIV-1 proteinase inhibitors. Thus, Z-L-Val-OC6H4NO2-p (Z = PhCH2O2C) was coupled with L-phenylalaninol (Phe-ol) in the presence of Et3N in DMF to give Z-L-Val-L-Phe-ol, which underwent the Swern oxidn. with oxalyl chloride and DMSO to give the aldehyde, which underwent the Wittig reaction with Ph3P:CHCO2Et in toluene to give alkene II, which underwent epoxidn. with m-chloroperbenzoic acid in CH2Cl2 to give epoxide III. The epoxide of III was cleaved by PhCH2NH2 to give title compd. IV. I were measured for their ability to inhibit HIV proteinase and to inhibit the cellular HIV-induced cytopathic effect.

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IC
     ICM C07C271-22
     ICS A61K031-325; C07K005-02; C07C237-22; A61K037-02
CC
     34-3 (Amino Acids, Peptides, and Proteins)
     Section cross-reference(s): 1
     carboxylic acid amino hyhdroxy; hydroxy amino acid prepn antiviral;
ST
     pseudopeptide prepn antiviral HIV proteinase inhibitor; human
     immunodeficiency virus proteinase inhibitor pseudopeptide
     Virucides and Virustats
IT
        (pseudopeptides)
TΤ
     Virus, animal
        (human immunodeficiency, proteinase of, inhibition of, by
        pseudopeptides)
TΤ
     Peptides, preparation
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (pseudo-, prepn. of, as HIV proteinase inhibitor)
IT
     1099-45-2
     RL: RCT (Reactant)
        (Wittig reaction of, with dipeptide aldehyde deriv.)
     102185-35-3
     RL: RCT (Reactant)
        (amidation of, with benzylamine)
     3182-95-4, L-Phenylalaninol
TΤ
     RL: RCT (Reactant)
        (coupling of, with valine deriv.)
                                        61671-44-1
IT
     100-46-9, Benzylamine, reactions
     RL: RCT (Reactant)
        (epoxide ring cleavage by)
IT
     9001-92-7, Proteinase
     RL: PROC (Process)
        (of HIV, inhibition of, by pseudopeptides)
                  80152-39-2
                               120369-25-7
                                            136465-98-0
TT
     49706-31-2
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        (peptide coupling of, with pseudopeptide)
IT
     10512-93-3
     RL: RCT (Reactant)
        (peptide coupling reactions of)
ΪT
     148743-45-7P
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        (prepn. and deblocking of)
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        (prepn. and epoxide ring cleavage of)
IT
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        (prepn. and epoxidn. of)
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        (prepn. and sequential Swern oxidn. and Wittig reaction of)
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                               Searcher: Shears 308-4994
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        (prepn. of, as HIV proteinase inhibitor)
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                   148743-46-8P
                                   148811-30-7P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of, as intermediate for HIV proteinase-inhibiting
       pseudopeptide)
L17 ANSWER 33 OF 34 MARPAT COPYRIGHT 1997 ACS
     117:20517 MARPAT
     Use of aryl hydroxyurea compounds for the treatment of
     atherosclerosis
     Garland, Lawrence George
     Wellcome Foundation Ltd., UK
     PCT Int. Appl., 16 pp.
     CODEN: PIXXD2
     WO 9203130 A1 920305
     W:
        JP, US
     RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE
     WO 91-GB1320 910802
PRAI GB 90-17351 900808
     Patent
     English
     Compds. ArYQ (Ar = furyl, thienyl, pyrryl, etc.; Y = C1-10 alkylene,
     C2-10 alkenylene; Q = OR1NCOR2; R1 = H, C1-4 alkyl, Ar as above,
     etc.; R2 = H, C1-4 alkyl, NH2, etc.) or physiol. acceptable base
     salts or derivs. thereof are used in the manuf. of a medicament for
     the prophylaxis and treatment of a condition for which inhibition of
     oxidative modification of lipids is indicated, esp. atherosclerosis.
     The preferred compd. is N-hydroxy-N-(1-benzo[b]thien-2-ylethyl)urea
                               Searcher: Shears 308-4994
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CODEN: JKXXAF

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I displayed antioxidant activity in peroxidn. of linoleic
     acid; the rate const. for scavenging of peroxyl radical was 0.11.
     Formulations for tablets and injectable solns. are presented.
     ICM A61K031-34
     ICS A61K031-38
     1-10 (Pharmacology)
     Section cross-reference(s): 63
     aryl hydroxyurea antioxidant lipid; atherosclerosis prophylaxis
     treatment aryl hydroxyurea
     Lipids, biological studies
     RL: BIOL (Biological study)
        (antioxidants for, aryl hydroxyureas as, for disease prophylaxis
        and treatment)
     Antioxidants
        (aryl hydroxyureas as, for lipids, for disease prophylaxis and
        treatment)
     Radicals, biological studies
     Radicals, miscellaneous
     RL: MSC (Miscellaneous)
        (peroxide, scavenging of, by hydroxyurea deriv., in inhibition of
        lipid oxidn.)
     Antiarteriosclerotics
        (antiatherosclerotics, aryl hydroxyureas)
     Lipoproteins
     RL: BIOL (Biological study)
        (low-d., peroxidn. of, inhibition of, by hydroxyurea deriv.)
     Pharmaceutical dosage forms
        (oral, aryl hydroxyureas in, as antioxidant for lipids, for
        disease propylaxis and treatment)
     Pharmaceutical dosage forms
        (parenterals, aryl hydroxyureas in, as antioxidant for lipids,
        for disease propylaxis and treatment)
     Peroxides, biological studies
     RL: BIOL (Biological study)
        (radicals, scavenging of, by hydroxyurea deriv., in inhibition of
        lipid oxidn.)
     Pharmaceutical dosage forms
        (solns., injection, aryl hydroxyureas in, as antioxidant for
        lipids, for disease propylaxis and treatment)
     Pharmaceutical dosage forms
        (tablets, aryl hydroxyureas in, as antioxidant for lipids, for
        disease propylaxis and treatment)
     142118-32-9
     RL: BIOL (Biological study)
        (as antioxidant for lipids, for disease prophylaxis and
        treatment)
     142118-32-9D, base salts
                                142118-32-9D, derivs.
     RL: BIOL (Biological study)
        (as antioxidants for lipids, for disease prophylaxis and
        treatment)
L17 ANSWER 34 OF 34 MARPAT COPYRIGHT 1997 ACS
     110:75498 MARPAT
     Preparation of heterocyclylamidoacetonitriles as agrochemical
    microbicides
     Suzuki, Hideo; Mita, Takeshi; Fukuda, Kenzo; Ochiai, Yoshinori;
     Hanaue, Masami; Nishikubo, Masao
     Nissan Chemical Industries, Ltd., Japan
     Jpn. Kokai Tokkyo Koho, 20 pp.
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PI JP 63135364 A2 880607 Showa
AI JP 86-283881 861128
DT Patent
LA Japanese
GI
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II Title compds. ACONR1CR2R3CN [I; A = heterocyclyl (a no. of AB structures are given, e.g. pyridyl, benzopyrazolyl; dihydropyranyl, and dioxothiophenyl); R1, R2 = H, alkyl; R3 = (substituted) cyclohexyl, (substituted) Ph, (substituted) naphthalen-1- and -2-yl, (substituted) 1,2,3,4-tetrahydronaphthalen-5- and -6-yl] are prepd. by Strecker synthesis of R2R3CO with R1NH2 in the presence of KCN, followed by amidation of the resulting R1NHCR2R3CN with ACOC1. To a mixt. of NH4Cl, KCN, and 28% aq. NH3 was added a soln. of m-FC6H4CHO in PhMe at 0.degree.. stirring the resultant mixt. at room temp. overnight gave 82.0% m-FC6H4(H2N)CHCN, which was treated with nicotinic acid chloride HCl in MeCN in the presence of Et3N at 0 to room temp. to afford 77.7% a nicotinamide II, which at 500 ppm showed 100% control of Pseudoperonospora cubensis and a minor damage on cucumbers, vs. 65% for zineb. A wettable powder was formulated contg. I 25, zeeklite 69, sorpol 5039 3, and carplex 3 wt. parts. TC ICM C07C121-47 ICS A01N037-34; A01N037-40; A01N037-48; A01N043-08; A01N043-10; A01N043-36; A01N043-40; A01N043-42; A01N043-54; A01N043-56; C07C120-00; C07C121-52; C07C121-78; C07D207-34; C07D209-08; C07D209-42; C07D213-81; C07D213-82; C07D213-89 28-9 (Heterocyclic Compounds (More Than One Hetero Atom)) CC Section cross-reference(s): 5, 27 ST heterocyclylamidoacetonitrile prepn agrochem microbicide; acetonitrile heterocyclylamido prepn agrochem microbicide; bactericide agrochem heterocyclylamidoacetonitrile prepn; fungicide agrochem heterocyclylamidoacetonitrile prepn Amination IT (Strecker, in prepn. of heterocylylamidoacetonitrile agrochem. microbicides) Bactericides, Disinfectants, and Antiseptics IT Fungicides and Fungistats (agrochem., heterocyclylamidoacetonitriles) IT 456-48-4P, m-Fluorobenzaldehyde RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

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IT
    118880-32-3P
                   118880-33-4P
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                                   118880-94-7P
                                                  118880-95-8P
    118880-92-5P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of, as agrochem. microbicide)
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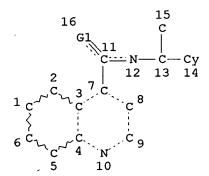
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US 5629460 13 May 1997
DE 19542569 22 May 1997
EP 775693 28 May 1997
JP 09132576 20 May 1997
WO 9715580 01 May 1997

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VAR G1=O/S/N
NODE ATTRIBUTES:
NSPEC IS RC AT 15
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RSPEC I

NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

ATTRIBUTES SPECIFIED AT SEARCH-TIME: ECLEVEL IS LIM ON ALL NODES ALL RING(S) ARE ISOLATED

L18 0 SEA FILE=MARPATPREV SSS FUL L16 (MODIFIED ATTRIBUTES)

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0 ANSWERS

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